

Making families eat with a more sustainable water footprint

An attempt from a design perspective

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ABSTRACT

When food is produced, enormous amounts of water are needed to make that happen. Since the water for that is more quickly used than it can be restored, there 's a need for people to go on a more sustainable "water diet". This project is about how a designer might influence the eating behaviour of families with mainly primary school children into more sustainable eating. First it goes a little deeper into the theoretical fields of behaviour change, environmental and health education, then follows the explanation of the designed campaign. This campaign starts with an eye catching food mob and continues to pop up regularly throughout 1 year. An important element in the campaign is the website. For that website, the outlines for the graphical charactre and the main user structure are being developed.

Key words:

water footprint, food mob, behaviour change, food, campaign, graphics

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1. INTRODUCTION

Every day, people use enormous amounts of water in their life. Most people think it is only the water they use in the bathroom, for cooking ... Sadly, this is far from true. Most water we use in our daily life is invisible: it is the water we eat. This may sound weird at first sight, but think about it. The carrots on my plate, don't they need water from the soil and rain to grow? Aren't they washed before they are packed into their plastic bag for the supermarket? And the delicious pork I love so much, doesn't that pork need to grow? Doesn't it eat food that should also be grown somewhere?

When you start to think like that, it is easier to believe there's a lot of water used to produce the food we eat. Scientists have been busy with all kinds of calculations and now we know that f.i. to produce 1 kilo of boneless beef, it takes approximately 18 700 litres of water. That's awefully a lot if you know that f.i. 1 kilo of tomatoes only takes about 280 litres of water. This number in litres per kilogram is what we call the water footprint of food. If the world would be endlessly filled with water that could be used to produce all of that without any complications, there wouldn't be any need to worry or even talk about this water footprint. Yet, there is no endless amount of water that can be used for those agricultural purposes. Water shortages are happening in different places in the world and water is sometimes used more quickly than it can restore.

That all sounds like there might be a little problem. And to me, it also sounds like there 's the need to do a project about that. Not only because it feels like there 's a need for a massive water sustainable diet, but also because this hidden water in our food is not at all common knowledge yet. So, it is time to dive into the field of eating behaviour and water, time to try to find a way to make families go on a more sustainable water diet.

2. BACKGROUND & GOALS

The project started out with some general information input into the field of the water consumption of food, food education and behavioural change, but also trying to find out what I wanted in this project and for whom it should be. This led to the project description that can be found in attachment A. The given context are family dinners in Flanders*, so main target group: young families.

In that project description 2 main goals are formulated:

1. To inform the target group about the water footprint concept
2. To change behaviour, this means: to get the target group into eating with a more sustainable water footprint. This is “the visionary goal” which makes the project more complex, but to me also more interesting.

Throughout the research and the project this goal for change will become the most important.

* The context from Flanders was chosen in the beginning of the project to give it a geographical and (food) cultural setting. During the development of the end result, this context became less relevant since there is no clear connection except the actual content of the recipes.

3. THEORETICAL RESEARCH

The result of the project description was following research question:
How can I effectively change children's & adult's food consumption into one with a better water footprint?

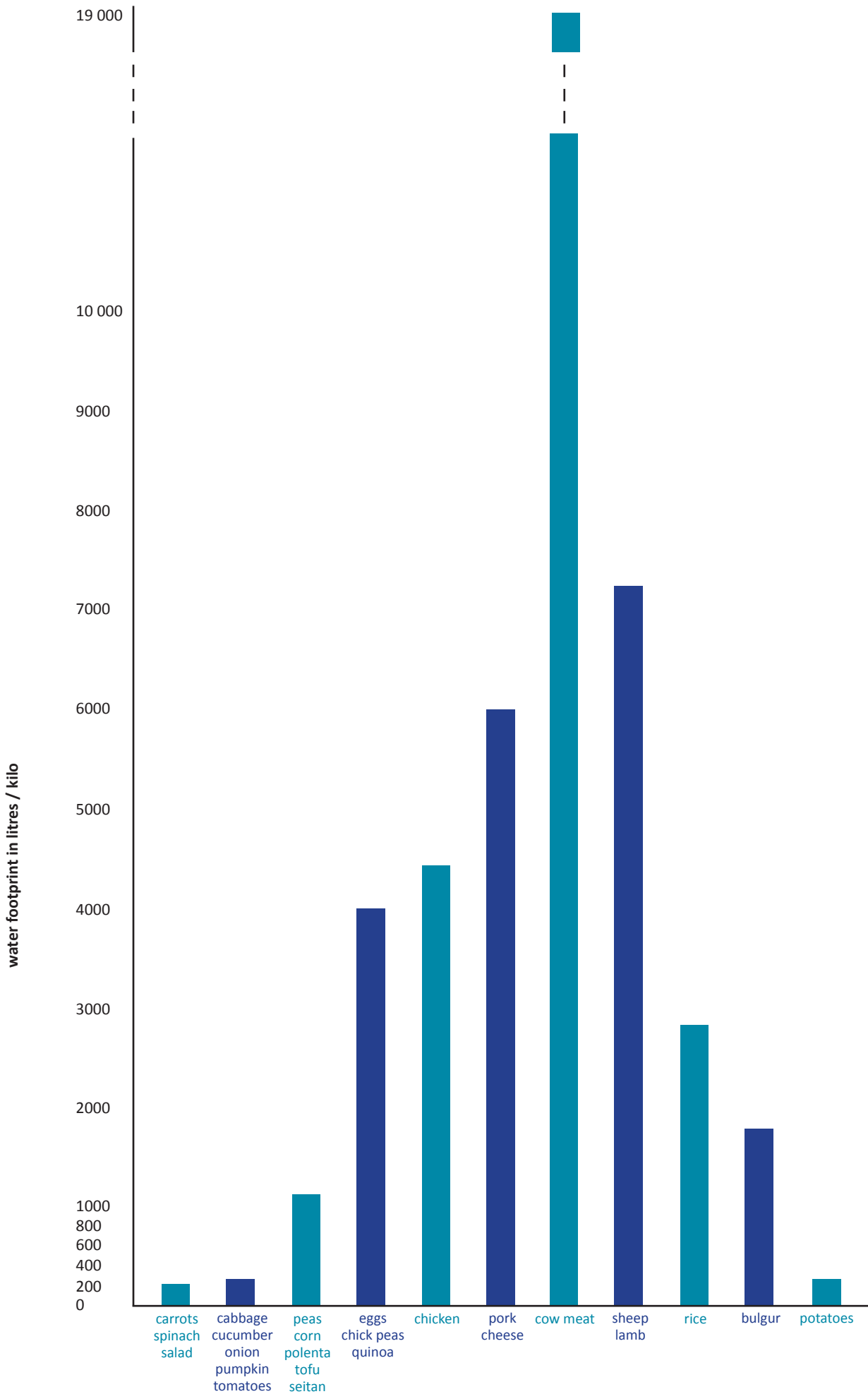
To manage the theoretical research, a mindmap with subquestions and themes was developed (attachment B). The most important subdivisions are food consumption and behavioural change, but before going deeper into that, a little more explanation about the water footprint of food follows.

3.1. The water footprint of food

What is the water footprint of food?

As mentioned before, the water footprint of food is a measure (in litres per kilo) for the total amount of water which is needed to produce a certain food product, so it is all the water throughout the whole production chain: f.i. from the moment the potatoe seed is planted in the soil, till growth, processing untill the end product, f.i. 1 kilo of unpacked fresh potatoes. For potatoes this is about 250 litres per kilo. The number is not a super exact number, but should more be seen as a way to compare this with other water footprint numbers. To produce 1 kilo of beef for instance, it takes about 19 000 litres of water per kilo. A table with more numbers can be found on next page (the data are based upon numbers from www.watervoetafdruk.be).

The theory of the water footprint of food is more complex than that, but diving into that does not add high extra value for the project. Yet, it is good to know that the water footprint of the same food can differ slightly from country to country. For this report, all measures are from a Belgian point of view.



Why is that water footprint important?

The water that can be used to produce food is not infinite in the world: salty seawater can in general not be used, which leaves only the so called sweet water from rivers, lakes, soil, rain ... available for food production. People consume this water more quickly than it can restore, with water scarcity as a consequence. Big rivers such as the Colorado river are under pressure because water is pumped out for food production, but also the water in certain lakes or water amounts in the soil are quickly being used. This water scarcity is only visible in certain areas in the world at a certain time. In Belgium the problem is not visible. Not only is the water footprint of food important for companies and their survival but also the daily customers can play a role. It is still the consumer who buys and eats the food.

How to eat with a more sustainable water footprint?

The water footprint does not say anything about the impact on the area where it comes from. A high water footprint does not always mean that it has a high impact on the related area. When trying to make people eat with a more sustainable water footprint, this does not mean they always have to eat as low as possible. Then how can consumers eat more sustainable without having to spend days with their head into information and becoming a water footprint specialist? To avoid that, there are some general guidelines for consumers to eat more sustainable:

- * Eat as much as you can biological produce.
- * Do not eat meat or eat less meat: replace this with plant related food, mainly vegetables and fruit. Avoid cow meat, focus on chicken.
- * Eat more local and seasonal produce.
- * Eat less processed food, so more fresh food.
- * Do not throw food away because it is throwing valuable water away.

So, going back to the visionary goal of this project “to get the target group into eating with a more sustainable water footprint” actually means to make people eat more according to those 5 aspects. These guidelines for this more sustainable “diet” look pretty similar to what sometimes is considered eating healthy because of the emphasise on fresh, unprocessed fruit and vegetables. It is therefore that the next chapter about food consumption and food choices will relate to children and healthy eating.

3.2. Food consumption and choices among children and adults: some influencing factors

Food choice is a complex issue with many factors you can or can not influence. The field of food choice research is not an exact science and is related to many different fields or aspects, such as society, the physical setting, culture, financial situation, time, place, the company you 're with, habits ...

Many aspects of these influence food choice for a certain person at a certain moment. These aspects can not all be influenced when aiming for change. Therefore this chapter will only shine its light upon the aspects which seem the most important for the project.

Context

The project result will aim at middle class family dinners, so the rough outlines for the context where the food will be eaten is given. Children seem to have a considerate influence on the shopping basket of the family, it is not the mother anymore who always decides what to eat for dinner.

Taste and taste preferences

When choosing food, taste is highly important for both adults and children. Taste preferences are developed early in life when a person is a baby, yet can be learned and can change later in life. When learning to like a certain food product or flavour, the theory of mere exposure is often considered as a successful method. This means one has to taste the new food multiple times so it gets more familiar to the person. In order to accept the new food flavour, a number of positive taste experiences is needed during these exposures. This number of positive flavour experiences is not the same for all people.

When it comes more specifically to children and taste (preferences), it is regularly stated in the media and in research that children prefer foods high in fat, salt and sweetness (Roos, 2002; Cook and Wardle, 2005; Hansen, Hilén, Huotilainen, Jensen, Johansson, Mäkelä and Roos, 2008). Among the favourite foods mentioned in these research papers are pizza, cake, ice cream, berries, taco's, meatballs, thai food, french fries, chocolate and buns. When it comes to dislikes, vegetables seem to be among the least favourite (Cooke, 2007).

Even though these similar favourites and dislikes among the children of Western European countries in the mentioned articles, one can not simply generalise these results towards all Flemish children. Besides: choosing food and (dis)liking food always remains an individual choice as well.

In “Nordic children’s foodscapes” (Hansen, Hilén, Huotilainen, Jensen, Johansson, Mäkelä and Roos, 2008) it is concluded that childrens favourite food is often categorised as unhealthy, yet that this is far from always the case. Some of the (favourite) foods are less easy to categorise in the healthy - unhealthy dichotomy. Since this project does not want to be categorised as a “healthy” (versus unhealthy) project, the more neutral food or dishes might be interesting to work with.

Food neophobia & picky eating

Related to the concept of taste and food preferences, food neophobia and the concept of picky eating are playing a role in food choice. Food neophobia is the avoidance or the refusal to eat new foods before they have even tried the food, picky eating is to be very selective and / or suspicious with what food one puts in his mouth. People who are picky eaters have a very limited diet because there’s much that they don’t like.

Even though new foods are often approached with a mixture of interest and fear, one should at least be aware of food neophobia and picky eating when developing a project about change in food consumption behaviour. It would not be strange that people get in touch with new food products during the project end result.

Food neophobia is related to disgust. To limit the feeling of disgust for food, it is suggested to present the food in a positive way and to show the fun of cooking (Dovey, Gibson, Halford and Staples 2007). Yet many other factors play a role: the parental feeding style, cultural norms, parental eating behaviours ... The authors of the same article also state that overcoming food neophobia and picky eating is necessary to make children adapt to a healthy diet with fruits and vegetables.

Children’s food culture and knowledge

Depending on the context and situation, there can exist something which can be called children’s food culture (CFC). It has to do with what foods and flavours are socially acceptable in a certain context, f.i. at school. This is different from what can be called adult’s food culture (AFC). Food can be a way for children to distinct themselves from adults. At school this CFC might be more clear and prominent for instance than at home, where the adult may have more power and where there might be less or no pressure from peers. In general, food communicates meaning and identity (Levi-Strauss, 1969; Douglas and Isherwood, 1978; Bell and Valentine, 1997; Douglas, 1999 [1975] cited in Elliott, 2010). Therefore children sometimes can have a pretty clear idea what they should (not) eat. If f.i. some dish looks too healthy in general, they might not chose or like it, even if they might like parts of it. In some contexts “healthy” is considered “for adults, not for children”. Regarding to that health issue, there ‘s a difference between knowledge and actual behaviour: many children

know what is healthy foods and they know they should eat preferably healthy, yet their food choices or preferences do often not lay in the same line as their knowledge.

Habits

Food consumption, eating and food choice are often linked to very strong habits and routine. When aiming for change into an eating pattern with a more sustainable water footprint, it is aiming to change routines and habits.

3.3. Trying to change peoples food choices: food education in the bigger picture

There have been numerous (school) projects trying to change children's dietary preferences and intake, often aiming for a more healthy food consumption with more vegetables and fruit. In the review about the effectiveness of school-based interventions in Europe (Van Cauwenberghe, van Lenthe, Brug, Oppert, De Bourdeaudhuij, 2009) one can read the attempts have often no significant better result, which is maybe rather strange and also sad considering the time, money, knowledge and effort that has been put into this topic all over the world the past decades.

According to Haden (Haden, 2006 cited in Bergström, Brembeck, Jonsson and Shanahan, 2012) the big mistake in educational food programs is the lack of joy and pleasure. He suggests much more emphasise on the visual, audible, tactile and gustatory elements of what he calls good food, in order to open children's minds to the pleasure of eating. Knowledge reunited with pleasure may be a place to start, instead of emphasise on knowledge. Knowledge does not lead to change and since taste is one of the main drivers in children's food choice, Hayden's vision doesn't seem odd at all. Or, to put this a little further and more personal: I believe we should aim for consumers, whether child or adult, which have a more open, curious attitude towards food, yet also critical. They have to believe that food is not just food. It is much more than that. With or without a big food budget, people have to believe they can create, that they are powerful, food has possibilities and food choice has consequences.

A mentioned element above is the aspect of joy, pleasure, fun. Fun seems to be an important part of children's food according to many companies. "Fun" packaging, "fun" shape of the food, possibilities to use the food as a toy ... are all omnipresent when at the supermarket. Though the intentions of the creators may not always stroke with it's use in reality, opinions about whether or not food should be played with (when eaten) differ. Within this project, when talked about fun, it is mainly about the fun to prepare, to cook food.

Considering food consumption, there 's a lot to say about (adult) types of food consumers. Time restraints limit the information here, but one key element is the food - related lifestyle concept (FRL). This is a person - related construct used in marketing contexts. FRL approach of consumers compliments the thesis that food choice is affected by product-, person- and environment related factors without replacing them. Marketingwise, consumers are divided into different groups such as the uninvolved food consumer, the careless, the conservative, the rational, the eco - aware and the adventurous food consumer. The project does not focus on one of those groups, so it is important to have all categories in mind when developing the concept for this project.

The situation in Flanders

In Flanders there have been several projects of all kinds, so food promotion - whether or not related to sustainability - regularly pops up in children's and adult's media. In general one can say food is a rather trendy topic the latest years, also sustainable food seems to gain attention.

To promote a certain food, the traditional campaign with a commercial on television and billboards along the roads is the typical example, f.i. to encourage people to eat more local meat. A campaign which went a step further was the campaign about promoting and re-valuing the local potatoe again. There the television commercial was combined with online recipes and some kind of misterious potatoe machine which travelled Flanders and of which people received different potatoe tapas. They made people eat new things, which is step in the good direction according to the research mentioned before. A more refreshing project about food is the yearly "Week of Taste". During one week in autumn, taste is all that matters. Every year they have a different theme and the theme is looked upon from different angles by different kinds of people. Schools and organisations are encouraged to participate, to put up their own taste / theme related activity on the central website ... Though this is not about more sustainable in general, it is valuable that they involve communities and individuals, but also that they put the aspect of "taste" centrally without falling into the healthy - unhealthy dichotomy. It seems they mainly aim for middle class consumers who have already an interest in (making) food, so they are probably missing out on the uninvolved or careless consumers or lower class consumers.

There are also food projects aimed specifically at children. Besides the incorporation in schools, there are different kinds of summer camps about food, the children's cookbook of the children's tv channel Ketnet, a television show where children compete against each other with cooking, a popular television personality which tries to get children play more outside again and also eat from nature ...

3.4. The water footprint of food: eating for the environment relates to environmental education

Trying to make families eat with a sustainable water footprint is a way of environmental education. Environmental education (EE) can have many definitions, but in general it is teaching people about some topic that is related to the wellbeing of our natural environment. This teaching can be knowledge, but also skills, attitudes ...

A critical note to environmental education

With environmental problems related to human behaviour rising, the importance of EE has been stressed by many organisations, f.i. the United Nations. EE - in whatever way it appears - has become part of childrens daily life. Children take in negative information and misinformation about the state of the planet regularly through different sources. Because of an overdose of rather negative messages, Michael Nagel (2005) argues children may have developed an attitude of hopelessness and apathy towards the world they live in. This puts question marks on how we eco educate our children (and adults). There 's a need to educate against apathy, but how to do that? Not by putting values top down on students or indoctrinating them with eco facts. Critical and autonomous thinking should be stimulated and too much conflicting information should be avoided.

Challenges when aiming for environmental change

When trying to create change for the environmental better, there are challenges to overcome. The aspect of "the environment" is not that easy and decisions in favour of a more healthy living environment are sometimes hard nuts to crack. According to O'Keefe and Shepard (2002) there are some perplexing factors. The most important ones they mentioned for individual consumers and this project are mentioned below.

- * Complexity of the environmental issue and complexity of possible solutions

- * Conflicting evidence on problems and solutions

- * Delay in visible consequences but the need for immediate action

This is a very important factor for the individual consumer which slows down change. If something will probably not affect us or our close environment directly negative within a short time frame in our lives, we are much more unlikely to change behaviour then if the consequences were happening right at our front door. If severe consequences may only be visible for the next generation or the generations after us, or somewhere in another place then our environment, we will be much less motivated to change behaviour. So, it is better to stress immediate gains in ones life, no matter how small then to focus on gains or losses somewhere far away in time or place. Besides that, people want to see positive consequences of their "ecofriendly" behaviour, to see a difference.

This is clearly a problem for the waterfootprint of food. The main problem lies in western consumption of heavy meat, processed international foods, yet the consequences are and probably will be mainly visible in places 'far away' such as parts of Spain or dried up lakes in Africa. Besides, if you would be convinced and you will eat f.i. no meat anymore, you won't see any proof of you making a difference at all.

* The need for critical public mass for action to be effective

To create meaningful change, one individual ain't enough: a big group of people needs to change behaviour in order to do so. Yet, in order to reach a broad audience, f.i. a country population, differentiation towards different sub groups and communities is needed. This is also the case if you want to change eating behaviour.

* Lack of congruence between environmental knowledge, attitudes and behaviours

Knowledge does not lead to action. Not only with food - health behaviour as seen before, but this is also very much the case with environmental behaviour. Persuasive Technology Lab Stanford University (also notes that it is a common mistake to expect knowledge to lead to change in behaviour.

* Need for citizen involvement

* Ethical considerations with campaigns

Such as: have all negative consequences been explored? Who 's behind the campaign? ...

It is the combination of some of these and other perplexing factors that makes environmental issues hard to tackle properly. Yet, there are approaches suggested to overcome these factors (O'Keefe and Shepard, 2002).

Depending on the problem, different approaches may be needed. Yet, a combination of regulatory and economic measures can be coupled with psychological appeals to be as effective as possible. Since the project will be from a designer's point of view, the possible approaches do not include political decisions or economic measures. According to O'Keefe and Shepard (2002) factors that do may contribute to success are:

* Emphasize community interaction: involve people, make them think, don't work top-down.

* Use a proper theoretical model of persuasion to develop a program.

In the case of the water footprint, the trans theoretical model of behaviour change may be useful or at least inspirational. This theory of behaviour change divides change into 5 stages: precontemplation, contemplation, preparation, action and maintenance of the new behaviour. People may relapse or progress and regress repeatedly and there are different factors which influence movement at different stages: people in the same stage should face the same types of barriers and be most helped by te same type of intervention.

* Having evaluative criteria and processes: without proper evalua-

tion of a programme you won't make proper progress.

* Keep the behaviours going after the programme: need for continued reinforcement and self-evaluation, persuasion techniques such as social pressure and material disincentives seem to provide evidence for change on the longer run.

Besides that, it is important to realise that people may not feel comfortable with giving up luxuries or changing their lifestyle. Differentiation may also be a valuable factor when aiming for change. Besides that, people need feedback and encouragement (Nisbet and Gick, 2008). Over time, positive reinforcement can help to establish habitual behaviour.

According to Persuasion Technology Lab there are 10 mistakes when aiming to change behaviour (attachment C). One of the mistakes which is mentioned in other researches before is the fact that information does not lead to change. From that point of view and the idea that there might be a "trap" of apathy and hopelessness, one can question one of the goals of the project: to inform the audience. This goal was put up since the water footprint is no common known topic in Flanders. During the process of the research, the focus on change has grown.

Similarities between aiming for a more healthy eating and a more sustainable behaviour

According to Nisbet & Gick (2008) there are similarities between health behaviour and environmental behaviour and similar challenges when attempting change. Some of them are in line with what 's stated above based upon O'Keefe and Shepard (2002).

- * Both have inconsistencies between attitudes towards health respectively environment and the behaviour people perform.
- * Overcoming health or environmental behaviours requires more than information.
- * Many health and environmental behaviours may be influenced by deeply rooted habits that are resistant to change
- * Preventive behaviours that are neglected may be seen as low risk and having delayed or distant consequences.
- * Personality characteristics play a role, f.i. more conscious, open and future thinking people have more sustainable attitudes and behaviour.

According to the same authors (Nisbet and Gick, 2008), attitudes and behaviour also have to do with norms in a society. So aiming for change in behaviour is also aiming to shift the norm. In the case of the water footprint project it can f.i. be the shift to making (cow) meat less popular and the image that eating more sustainable is not only for eco freaks. It feels that this shift has already started among the young middle class in Flanders throughout actions such as the yearly 40 days without meat before Easter which is an attempt to reduce the carbon footprint. Yet, there it feels like "there is a lot of work left to do".

3.5. Conclusion with guidelines for the concept

Throughout the previous research, it has become clear that attempting for change in eating behaviour is a complex matter with factors that can not always be controlled. Yet, it also has shown that there are aspects which can contribute positively or negatively to succeeding in changing eating behaviour. In order to help concept shooting and concept trashing in a next phase, a longlist with guidelines that contribute to success has been made. The concept can not be according to all of them, so the more important they are regarding to succes for change or to food behaviour, the bigger they are marked here.

possibilities to **differentiate** among and **talk to many** different consumers

down to earth innovation: innovative yet with both feet in Flemish reality for 2013 - 2014

community involmment: the higher the meaningful possibilities for active participation and involmment the better? use existing community networks and unexisting ones

valuing the importance of **taste** (relates to pref learning, the possibility for mere exposue and creating an open attitude)

CFC - AFC: the possibility to be in the cross section of it, if there exists a cross section (?) (so no positioning in typical CFC or typical AFC)

possibility for connection **school - family**

attempt **small steps**: this means: expect the change to happen through slow social norm changes rather than through effects of direct message exposure on individuals, desired new behaviours should fit easily with current behavioural patterns

is the concept reaching much of the targeted audience **repeatedly** with appropriate messages?

is it constructively contributing to **tackle the norm** of "meat = a need"?

does it focus on creating **new low wfp behaviour**? (instead of stopping old behaviour)

child - adult eater dichotomy and interplay: where do I aim it to be? Does it seem to contribute to lower this dichotomy? And to deal with the numerous accountable aspects influencing the interpay?

does it rely **as few as possible on willpower**?

is it **changing the environment** for the better so the behaviour is easier?

are there / is there a powerful splendid **trigger(s)** to activate willingness for the behaviour and also more important: to activate the new behaviour itself?

information does not lead to action at all

does it focus on very **concrete behaviours**?

does it aim for behaviour on a **short and / or fixed period**? (instead of unmentioned time, "forever", "as long as possible" ...)

does it trigger **curiosity** into the toppic of the wfp of food and food itself?

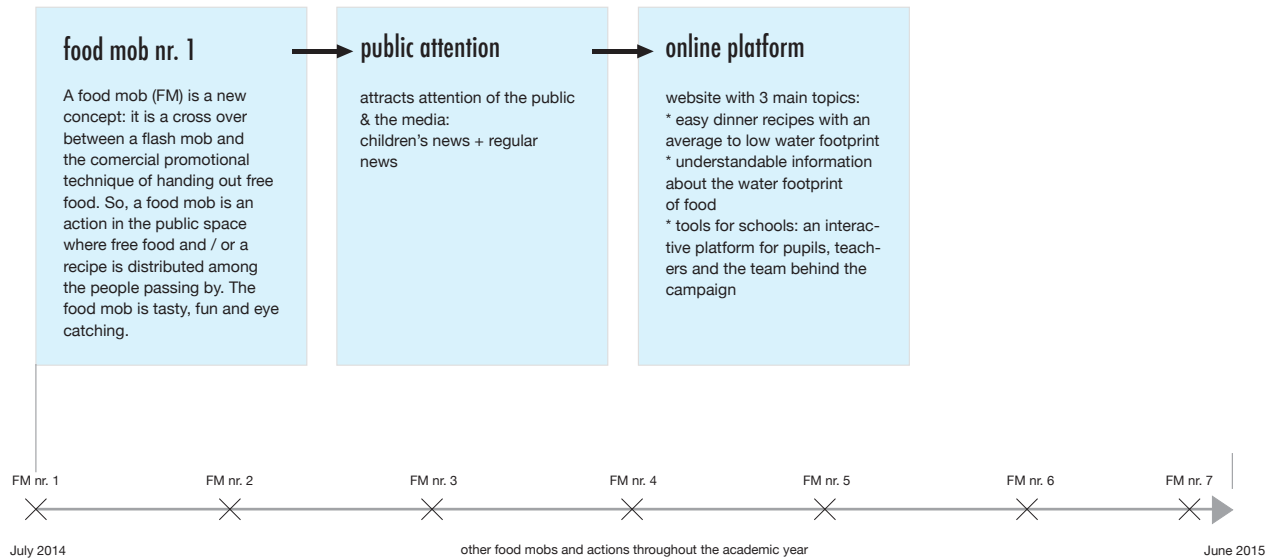
keep it going: the concept should have meaningful possibilities to keep the low wfp eating behaviour going after the "action" or concept is "done"

does it make the behaviour **as easy as possible to do**? This means:

little effort to eat low wfp - little effort to find low wfp food - little budget - little time - little space - much jummy - very compact info

4. CONCEPT DEVELOPMENT

After several phases of ideation of concepts and trashing (attachment D), the food mob concept came out as best. It is not “the only perfect solution”, but a fresh and research related way how the aim for change and information can be achieved.



The food mob concept is a campaign on the level of Flanders in order to attempt to reach many families at the same time. It all starts with food mob number 1. A food mob is a new concept in society. It is a combination of a flash mob and the commercial technique of handing out free food. This means that a food mob is a joyful, fresh activity in the public space (such as a train station, a market square ...) with a funny twist or a “wauw”- factor. Its goal is to surprise people in a nice way, to attract media attention and to be talked about. During or right after a food mob, people who pass by can try out the food product(s) which the food mob is about. Thereby, its aim is also to make people try and eat food, and to trigger their curiosity into food and into what the project is about. The aim of the food mob is not to educate people about the water footprint. Taste is highly important according to research, so taste is what the food mob should be about.

By having repetitive food mobs (approximately 1 food mob every month or every 2 months throughout 1 year), the image of sustainable food will hopefully be tackled and through fun tasting, people can be encouraged to try it out themselves. Therefore a website is related to the food mobs. The main content for that are not too hard nor too expensive dinner recipes, water footprint information in a fun easy understandable yet correct way, tools for schools and the (link to) social media. The social media are the perfect tool to keep popping up in between food mobs, post interesting facts, triggering preparation video's of an upcoming top secret food mob ... The social media are mainly directed at the parents and the eldest children.

If the campaign gains popularity throughout the year, the organisation can also count more and more on the involvement of citizens for its upcoming food mobs or other actions.

The recipe content are highly important to really get families into cooking / eating lower water footprint. First of all, the very high water footprint foods (cow meat, chocolate, vanilla ...) are not used. Yet, if there would be no meat in the recipe collection, a lot of people won't be reached. So, there is a numerous amount of recipes with meat, but almost all of the meat recipes include chicken meat since that has absolutely the lowest water footprint. Furthermore there are some foods which play a central role, such as the potatoe, carrots and onion. These are foods which are available almost all year round, can be easily produced in Belgium and have a rather neutral position: they are not considered typical adult food nor typical children's food. The recipes do not have to be newly "invented", more important is to show a variation in flavours, textures and preparation time. The recipes are divided into about 5 categories with inspiring fun names. In Dutch it is: "kiplekker", "stapelgek", "koude kunstjes", "in de mix" ...Translated in English the categories are something like a wordplay with chicken and yummy (so only chicken recipes there), crazy piled up (every recipe is some kind of stack or pile), cold artworks (cold food), in the mix (mixed food) ... As one can notice, these names do not reflect the sustainable idea behind. It is about taste and triggering people, so within the recipes there will only be a small reference to the water footprint.

The recipes are not there only for the parent. They should be visualised and constructed in that way that children are encouraged to help out in the kitchen because it looks fun or that they say "hey dad, can we have this for dinner tomorrow?". The website / recipes are intended to work best and look good on mobile devices.

During the development of the content, I started to work on the recipes themselves. How they should be named (fun or triggering names), how they might look, what kind of recipes and dinners it could be ... since I thought for a while I would focus on the actual recipe content since taste is so highly important. But, there would be no time for that, so this work was put aside.

The name of the project has become "ikook". This is a Dutch word play with the meaning and words of "I cook" and "me too".

5. GRAPHIC DEVELOPMENT

After working through the outlines of the content of the concept, the decision to work on the graphical identity of the project was made. This seemed to be a necessary first step: to find a logo and a style for the recipe's and front page of the website. Having almost no experience with graphical design, I just jumped in. What follows is a quick overview of the most important steps in the process.

5.1. Collage moodboard

Some kind of mini collage was made as a way to point out a visual direction. Other interesting moodboard images were collected as well (but they can't be shown here because of copy right).

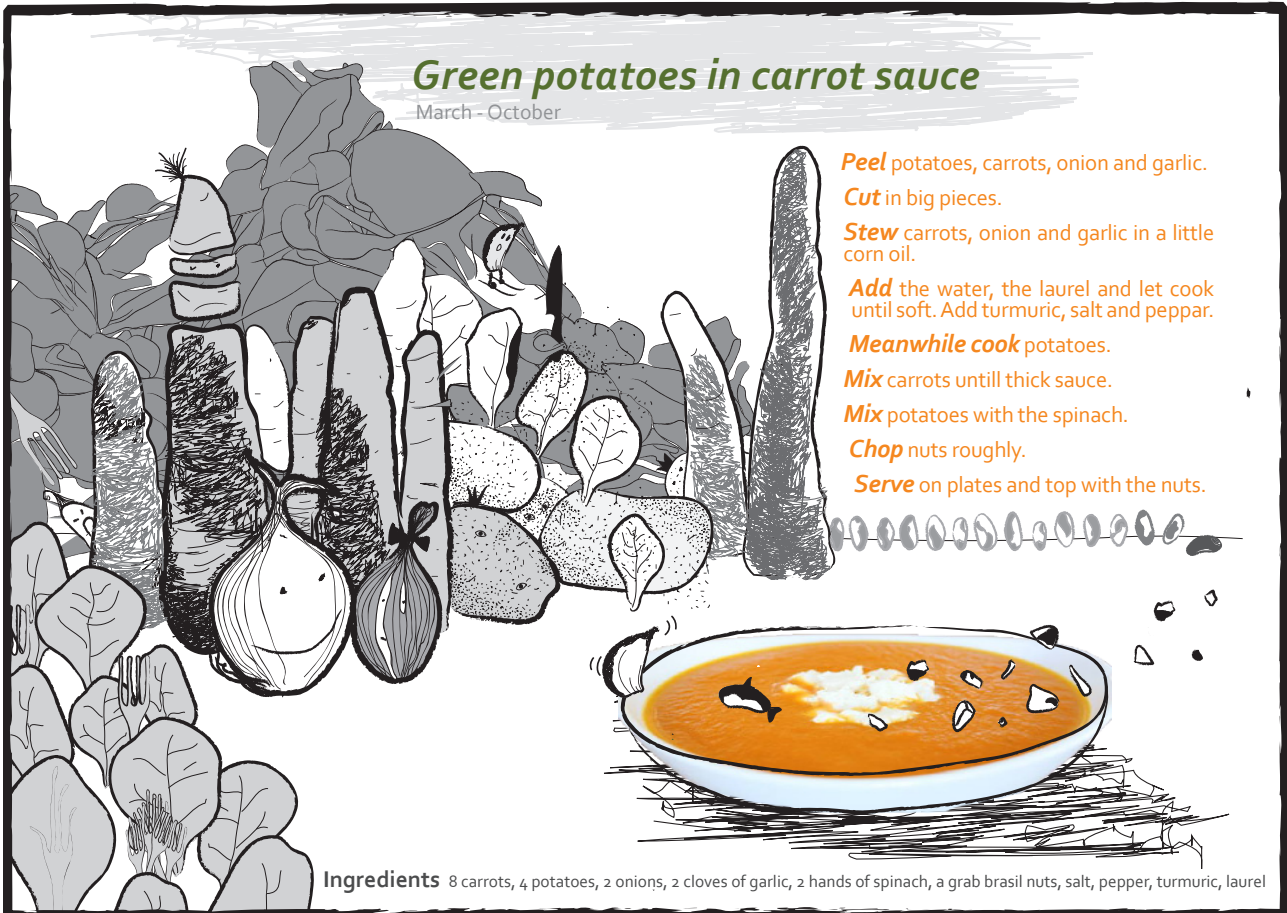
5.2. Long collages

These were very much based upon the collage made. The idea was to have the recipe in some infographic style that suited the phones such as the iPhone. These turned out to be very unclear and chaotic.



5.3. Black and white

Starting from my 3D design background, real sceneries with real vegetables were made and used as a basis for this black and white concept. But, this was not tasty, nor clear about the instructions if one did not have (much) cooking experience. The graphics were not functional but more something separate.

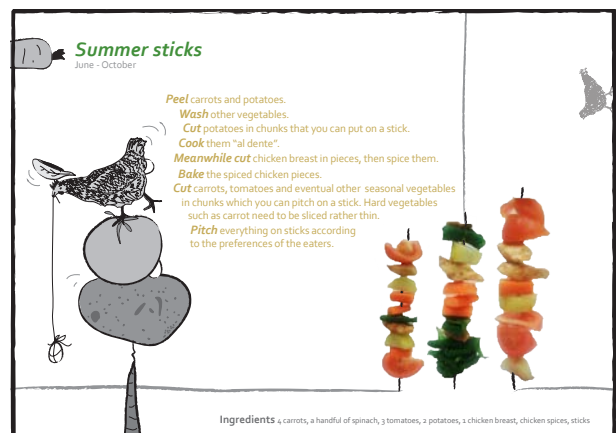


Green potatoes in carrot sauce

March - October

Peel potatoes, carrots, onion and garlic.
Cut in big pieces.
Stew carrots, onion and garlic in a little corn oil.
Add the water, the laurel and let cook until soft. Add turmuric, salt and peppar.
Meanwhile cook potatoes.
Mix carrots untill thick sauce.
Mix potatoes with the spinach.
Chop nuts roughly.
Serve on plates and top with the nuts.

Ingredients 8 carrots, 4 potatoes, 2 onions, 2 cloves of garlic, 2 hands of spinach, a grab brasil nuts, salt, pepper, turmuric, laurel



Summer sticks

June - October

Peel carrots and potatoes.
Wash other vegetables.
Cut potatoes in chunks that you can put on a stick.
Cook them "al dente".
Meanwhile cut chicken breast in pieces, then spice them.
Bake the spiced chicken pieces.
Cut carrots, tomatoes and eventual other seasonal vegetables in chunks which you can pitch on a stick. Hard vegetables such as carrot need to be sliced rather thin.
Pitch everything on sticks according to the preferences of the eaters.

Ingredients 4 carrots, a handful of spinach, 3 tomatoes, 2 potatoes, 1 chicken breast, chicken spices, sticks

During this phase, I looked into existing (mainly informative) websites for primary school children. One aspect was the main structure and the interface that goes with it, the other aspect is the graphical character of it.

The websites looked into were often very crowded and rather “screaming” to you. This is mainly due to the combination of colours, structure and images. When it comes to providing information or guiding visitors through something of whatever kind, being simple and clear in visualisations and structure will benefit the visitor. They should find their way easily and quick to what they are looking for or discover quick what it is about and what the possibilities are. Too much distracting colours, things popping up, menu tabs or hyperactive shapes can not be helpful with that (this is the case with the website below), especially not when one has f.i. problems with sight, concentration If one ads moving elements or sounds, they can also get boring or annoying if people visit the website many times again (such as is the intention with the recipes in the concept: people should return to the website many times and use it to cook). Therefore, use of sound and movement should be limited and used consciously, rather functionally.



Screenshot from <http://www.jhmkindermuseum.nl>.

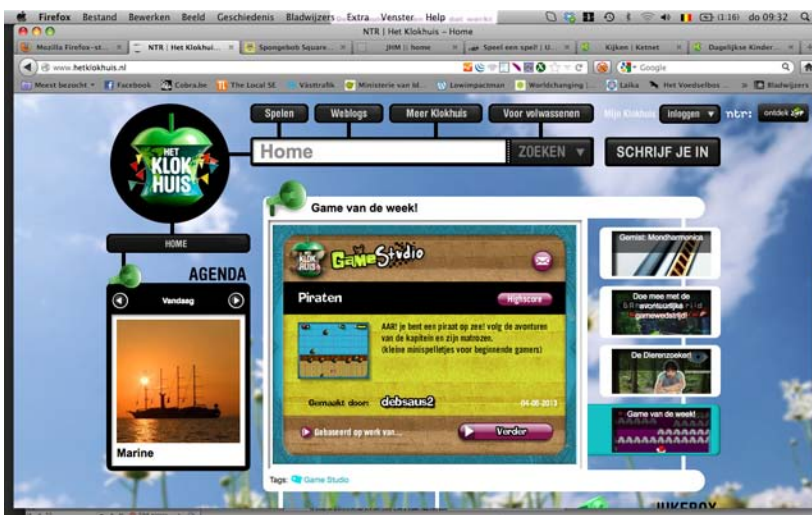
(a section of a museumwebsite for children)

Not that busy front page, but many sounds and moving things which are the same all the time.

Limited use of words, which can be good if the images are clear or triggering.



Screenshot from <http://www.ketnet.be>.
 (a popular Flemish children's tv channel)
 Poppy structure and colours. Too little focus, everything looks important and too much the same. Combination of images and words may be interesting to make clear what you find there, on the other hand it may be too much and it can be better to go for one of both: clear text



Screenshot from <http://hetklokhuis.nl>.
 Clear structured and readable menu bar on top that you see right away. You always know rather good where you are in the site, even though it is a bit confusing with both a top menu bar and a side menu bar. It doesn't look like they have a clear visual identity.

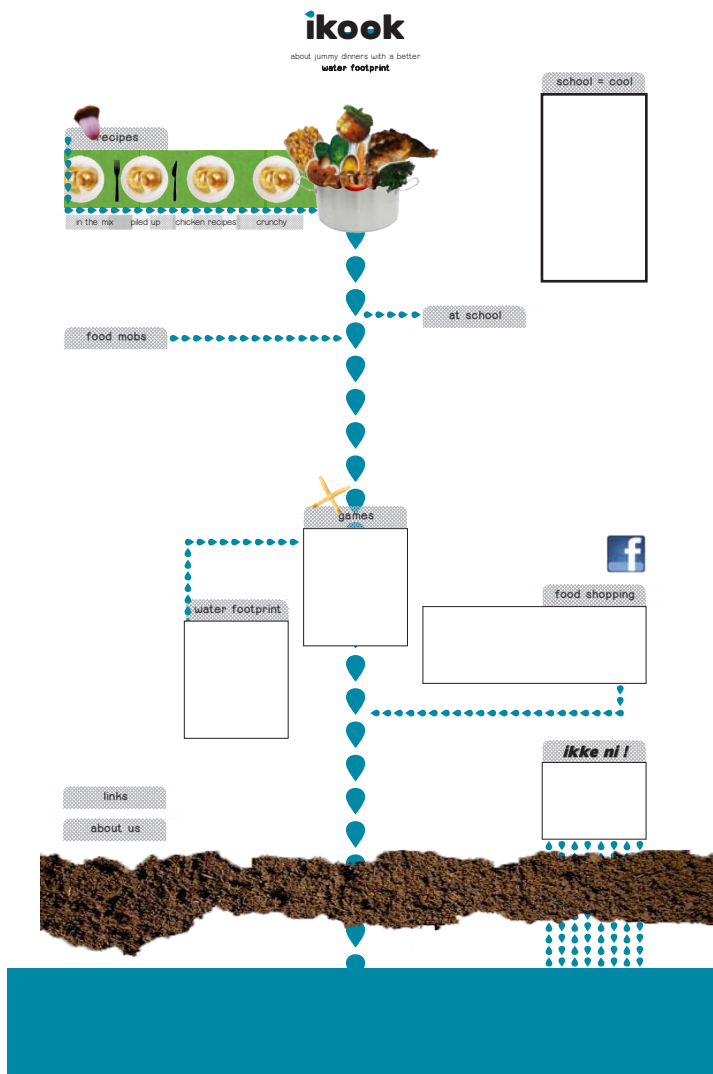
The websites that have been looked upon all had rather a lot of information on them right from the starting page. It might be interesting to try to limit that and first focus on the most important things on the site, and only when one goes deeper into it they can find other - more secondary information such as the tools for schools, information about the organisations etc.

5.4. Minimalistic structures

In an attempt to make it look more tasty, photo's were incorporated. And instead of working with the recipe, the front page and logo was focused on. If those would work out, the recipe would follow in the same line. Working them out was easier said than done. While trying to work with different style concepts such as shown here, it turned out that it was about different structures and different technical possibilities. The style was pretty much all the same.

Throughout tutoring sessions I learned that many of these were actually not different styles, but all different structures. Along the way, words were put up to which the visuals should refer to. In the end the words are: fresh (as in "not the brown paper bag eco feeling"), the food should look tasty and pretty real, joyful, positive.

These structures were the result of technical research as well. The drop system on the next page f.i. would be a flash website, the others can do without that. But, in the end that looking into how can a webplatform be build, what elements can be combined and what not, how do you host a website eco friendly, what programs do you need to make it work ... didn't matter in this phase of the project and were from that point of view waste of time and effort.



Still rather busy when the squares are filled with images and movies. Too abstract use of the water levels in the logo. Too static logotype. Drops can be a little weird and too abstract as a metaphor for rain and soil water.

ikook

jummy dinners with a better
water footprint



recipes

in the mix
stapelgek
kiplekker
koude kunstjes
10 x kip met appelmoes

10 kooktips
keukenspelletjes



in the store

games



op school



food mobs



links



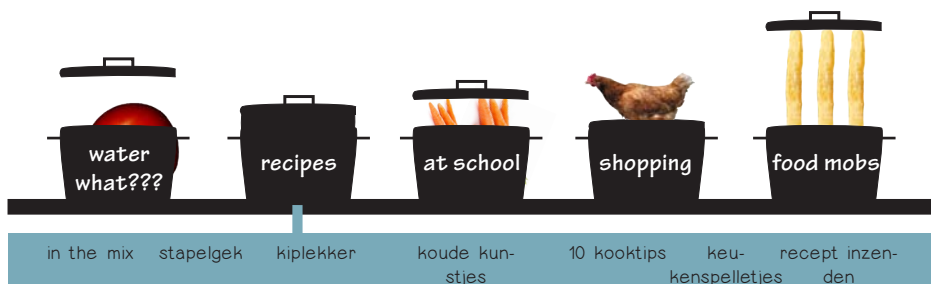
wie zijn wij?



Unclear that it is food in the drops. The visuals give the feeling that this will attract mostly only the youngest of primary school, which it should not. This flash system with moving drops might be with too much movement and change. Too much white, too little structure and focus.

ikook

about jummie food with a better water footprint

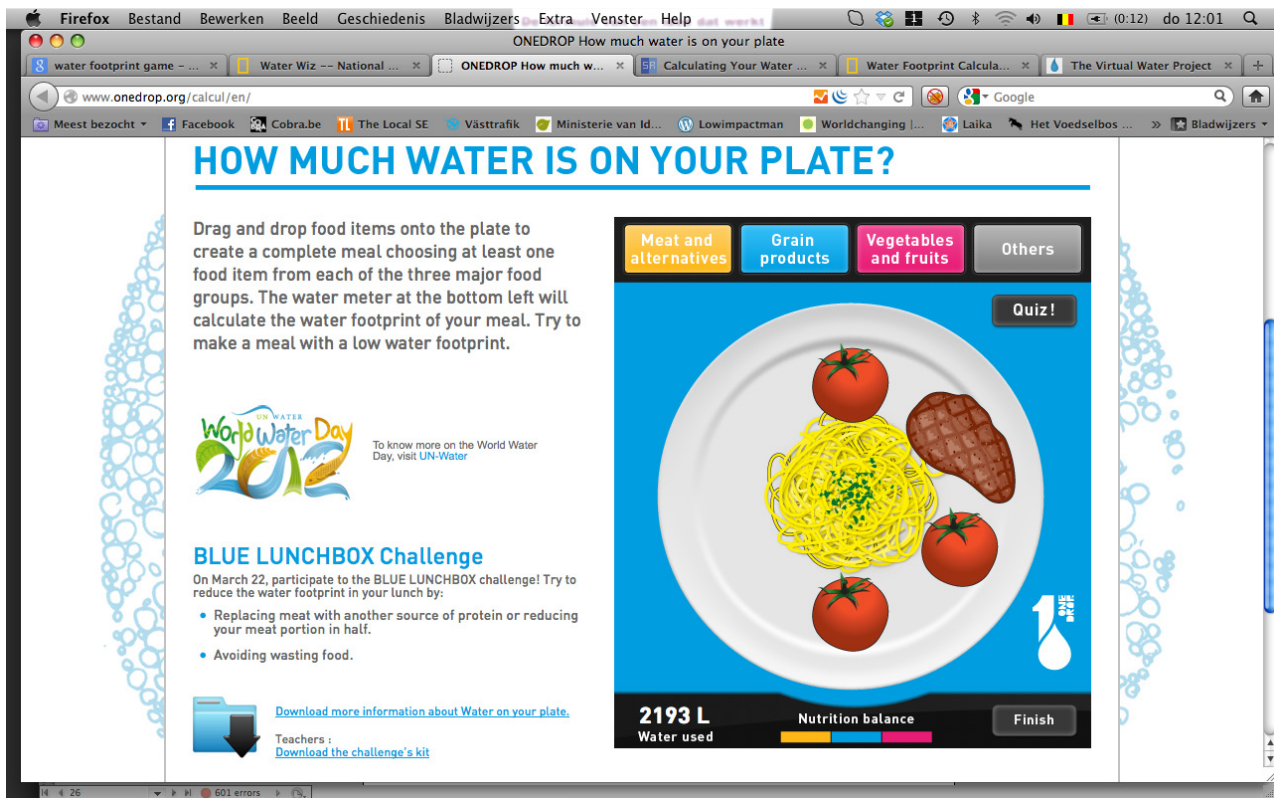


When looking into existing water footprint websites or parts about it on websites for children, they sometimes use an animation to explain the information, some kind of simple questionnaires and / or some kind of game where you can drag food on a plate and then read how much virtual water that is. When only using animations or text, one will not reach so much behaviour change, but from an informational point of view a good animation movie can be worth it. This may be an idea for the informational part of the website, yet it would become more interesting if the child can actively participate in gathering the information. Therefore an interactive animation or a game in which the child has to think, to make choices, to be creative ... is more interesting. One also learns more when you can be an active participant compared to passive watching and / or listening. But, that informational part is not for this time span so it is limited to these general suggestions.



Screenshot from <http://kids.nationalgeographic.com/kids/games/puzzlesquizzes/water-wiz/>

It is a lot of reading while at the same time the style of cartoons looks a bit too much for young children, the "game" has (according to me) an annoying background music that has nothing to do at all with the subject, it is focused on scoring point by answering right. This seems to be knowledge focussed, not truly aiming at change of behaviour.



Screenshot from <http://www.onedrop.org/calcul/en/>.

This is an example of a game where you can compose your own virtual dish and read immediately how many hidden litres of water go into it. The immediate visualisation of act - effect is good, yet too bad you don't really get an idea how much volume these litres are since it is only a number. The choice of food is rather limited (the example shows my closest attempt for spaghetti bolognese) and when using it, it doesn't look like I can use it to really cook once I have composed the dish that I want. Children or people with more limited cooking skills and knowledge than me will then probably definitely have problems with making this into a real dinner. That seems like a missed opportunity. They also relate to how healthy your dish is, which is not a needed part to me.

5.5. Painted black & white style

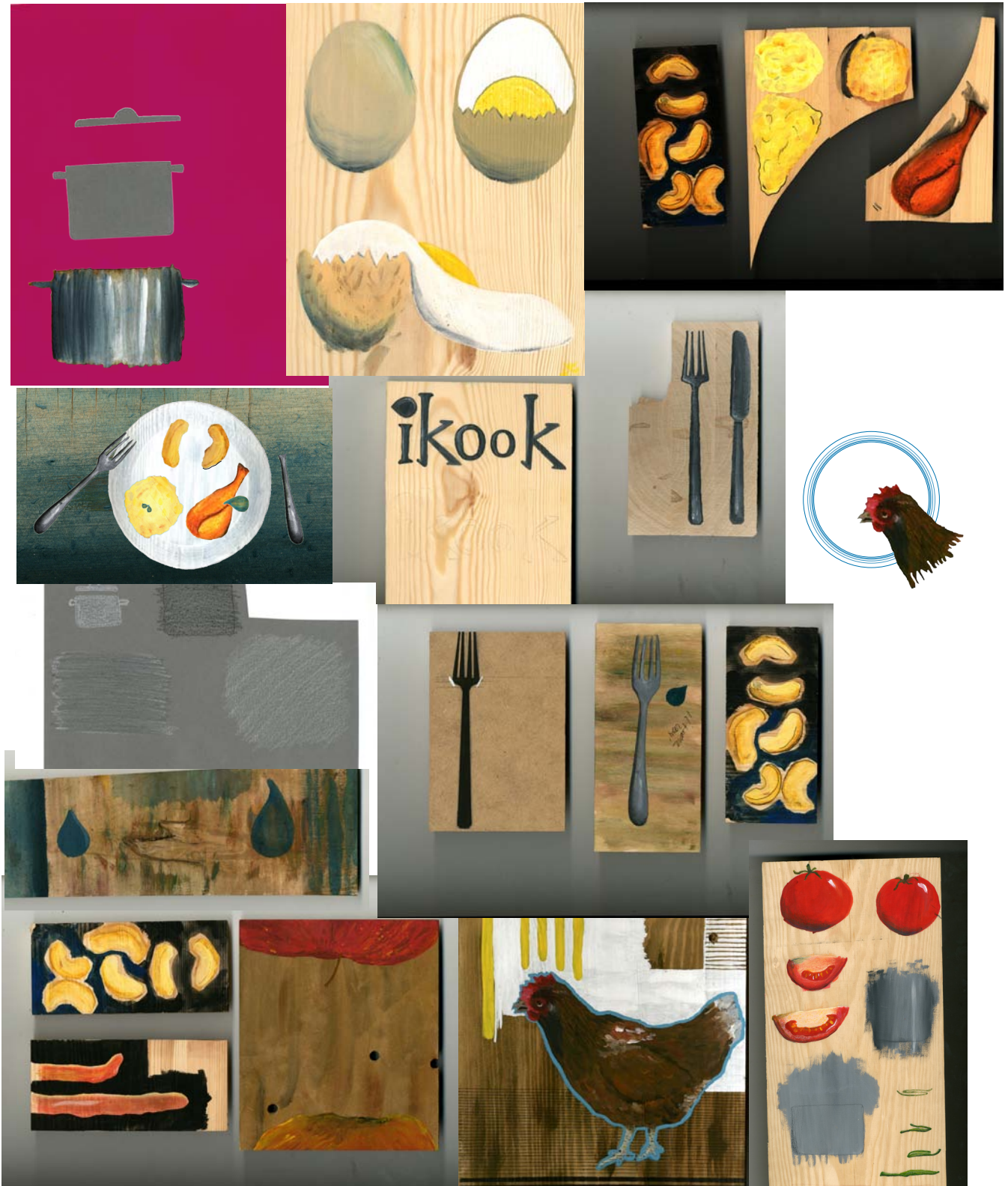
In order to avoid pictures but still work with a pretty realistic and tasty looking food visualisation, I started to paint and photoshop vegetables. The colours really nicely pop with minimalistic black and white, but functionally this does not say anything about water or water footprint.

These paintings would be a starting point to go further. More paintings were made, backgrounds tried ... to try to find a visual character that would communicate that it is a fun website about jummy food and about the water footprint of food. Along with the visualisations, more structure thinking and try outs came: about the front page but also about how to structure the recipe so that the oldest primary school children can understand them while helping out in the kitchen or while co-deciding what 's for dinner tomorrow.



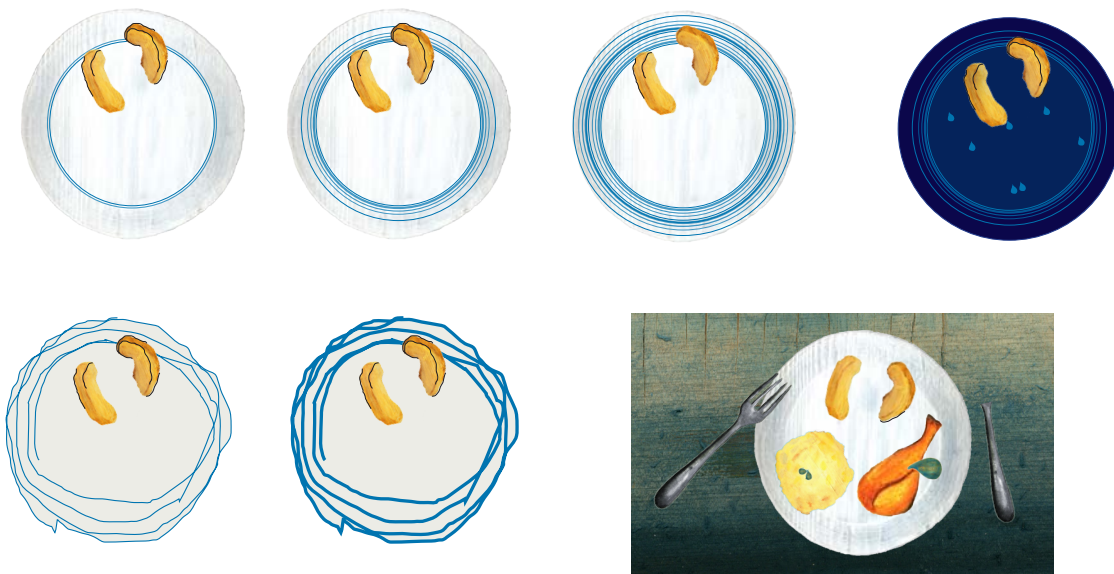
5.6. Development of painted style

An attempt to make the different parts look tasty and find joyful, fresh visuals and to make them go together. By combining the painting with computer drawings, the crafts feeling is broken, which is needed not to make it too much “brown paper bag eco”-feeling.



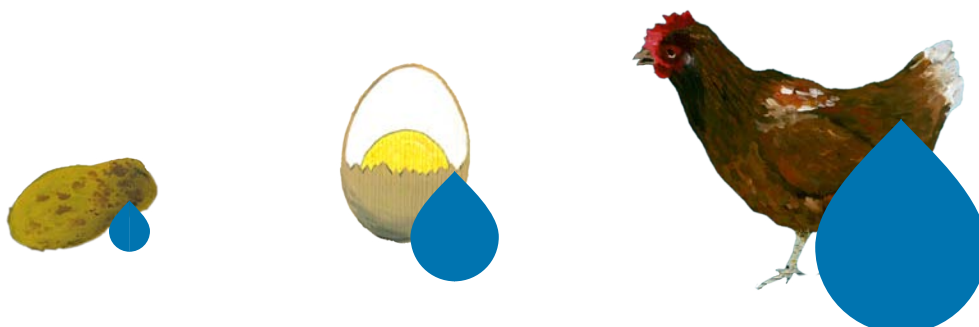
Throughout these phases and the next, there has been the question “how to visualise this water footprint the best so people understand?” This is both the case with the front page where it should maybe be clear that it is about water footprint (though information does not lead to change so I don’t consider it a real need), but also how to maybe make this clear in the recipes so that people have an idea of the water footprint of a certain dish.

When it comes to the recipe and dish, it might be visualised on the plate in an abstract way, such as circles relating to rather little, average or rather high water footprint. Drops on the plate or a water level behind it can be a more clear way, yet the drops on it may be weird.



To be less abstract, one can also use existing volumes such as bath tubs, buckets or litre bottles. Buckets and bottles are the most clear volumes since they are rather defined, part of daily life and easy to grasp with your mind.

The drop is an other possibility since that is a clear symbol of water. When not wanting to show exact volumes, drops varying in size can be an abstract way to make clear when it is about little or a lot of water.



Besides the water footprint visualisation, the logotype and what font(s) to use have been a key issue during these phases of the project.

Starting of totally of the edge by trying to create a logo that was a little vivid, yet not too crazy nor soft, from food on top of printed out text, it ended up painting the logo based upon a font on an old poster for Seven-Up.

Since it is an ecological project, it had to have this eco touch as well. Very often, ecological logo's and websites have green or brown in it for recognisability. Some kind of "natural" shape or more abstract symbol such as a leaf are also common. Websites related to water often have a lot of blue. But, this project is not only about that: it is still mainly about food. So, when visualising it is about balancing those in a refreshing yet still recognisable way, but also maybe what charactre is most important at a certain point in the site?



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Starting fonts for logo development

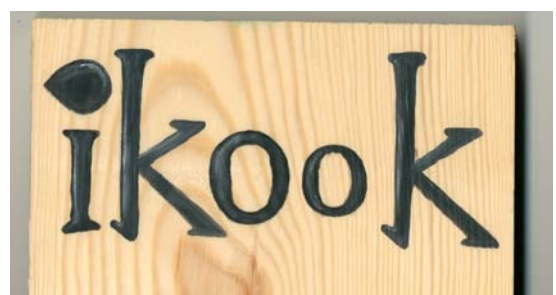


ikOOK

jummy dinners with a better
water footprint

ikook

about jummy dinners with a better
water footprint



If the logo is painted like the cooking tools (so a little edgy and in the same grey style), it may contribute to cohesion in general.

Hooray! Buffet—with Seven-Up!
Nothing does it like Seven-Up!



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about yummy food with a better water footprint

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about yummy food with a more sustainable water footprint

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about yummy food with a more sustainable water footprint

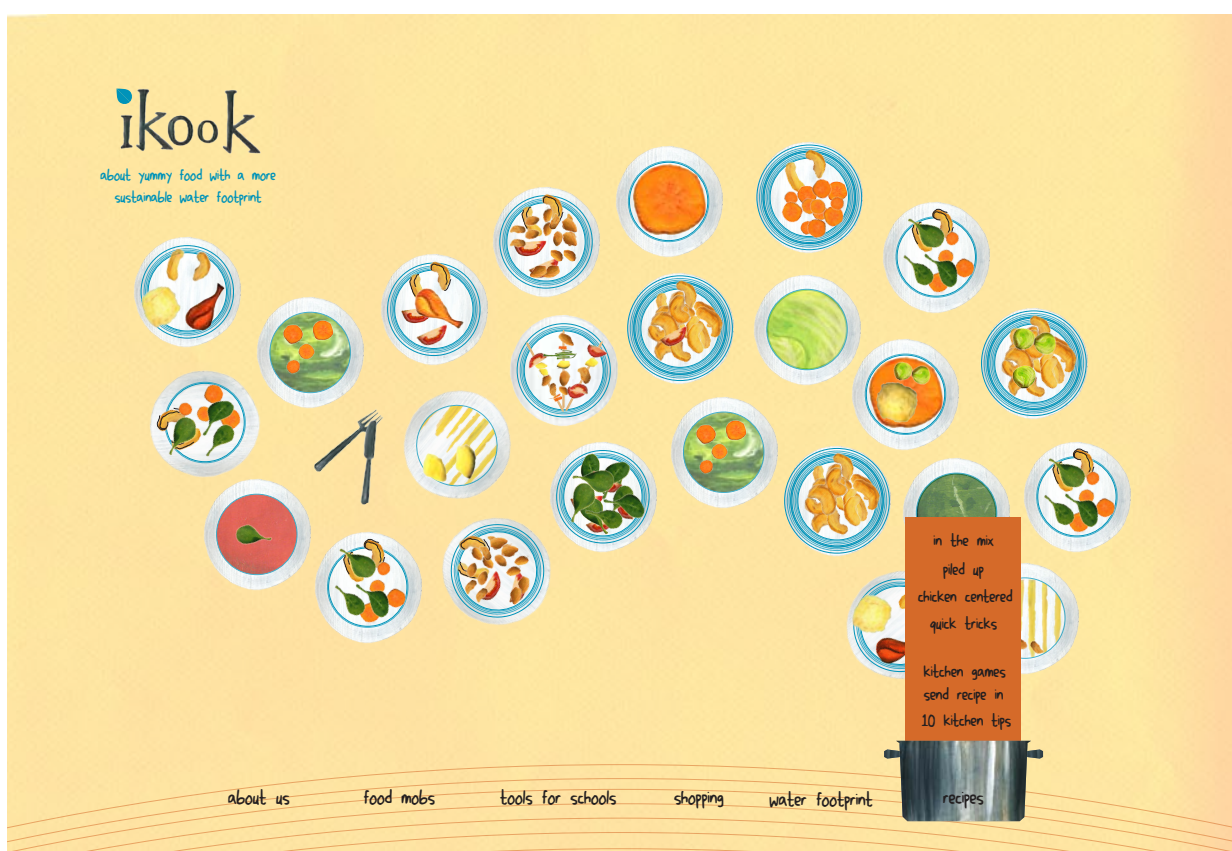
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5.7. Painted frontpage and recipe example

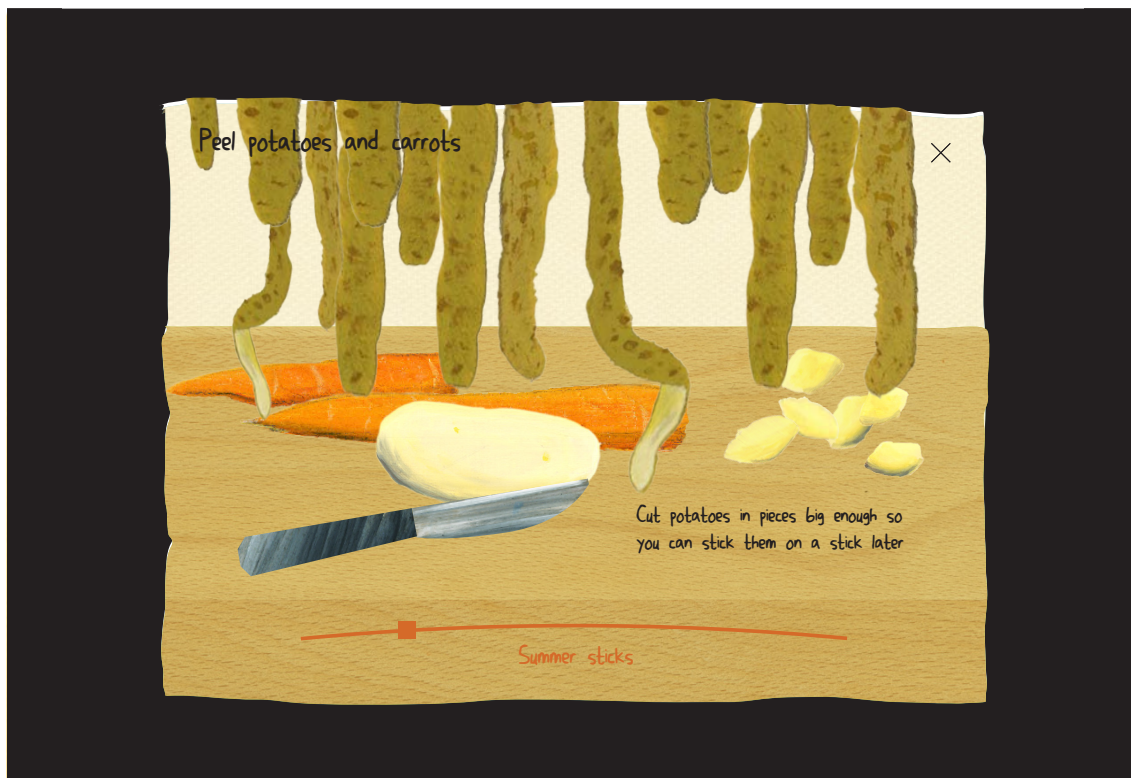
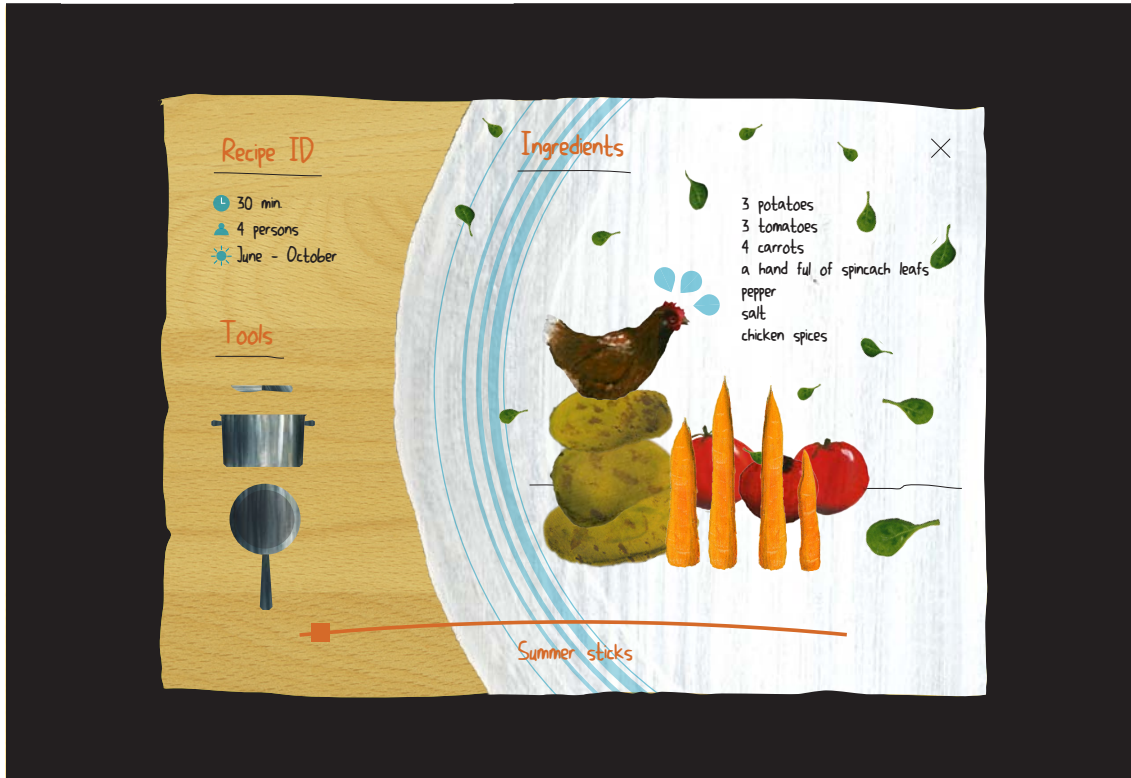
When trying to make it all into a front page of the website, this was the first good result that came out. Although it is a nice flow of the plates (which can be clicked on and then you are directed to the recipe), it doesn't look like a landing page of a website, it looks like you're already in it. It is also too busy.

About the visuals: it is not clear that it is about the water footprint. The colours are semantically wrong. The circles around the plates which indicate the water footprint of that dish are too abstract for children. It should be more clear.

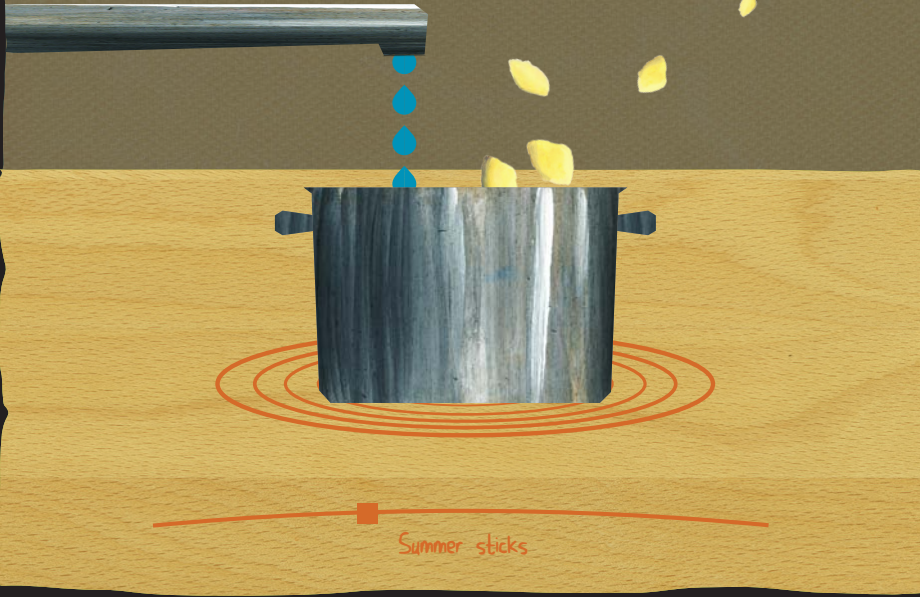
Also, it is not clear that this website is about the water footprint. Like this, it looks like a cooking website, which it is not really.



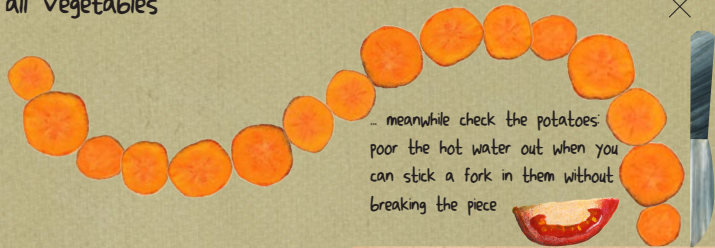
When clicking on a dish, a light box will pop up on the screen, so everything else becomes invisible. The only thing you see is the recipe. This is divided into steps.



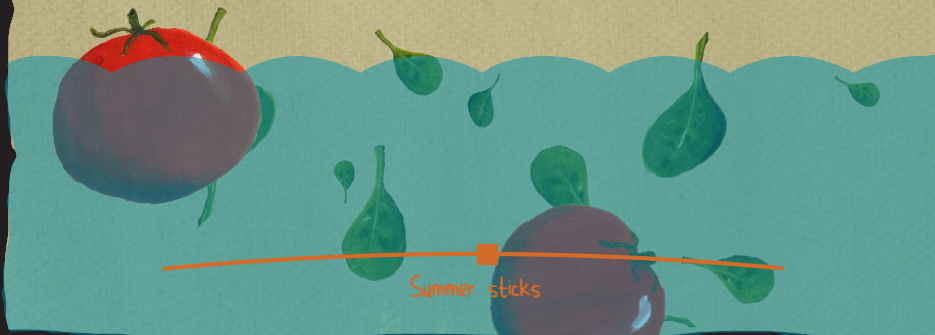
Boil potatoes



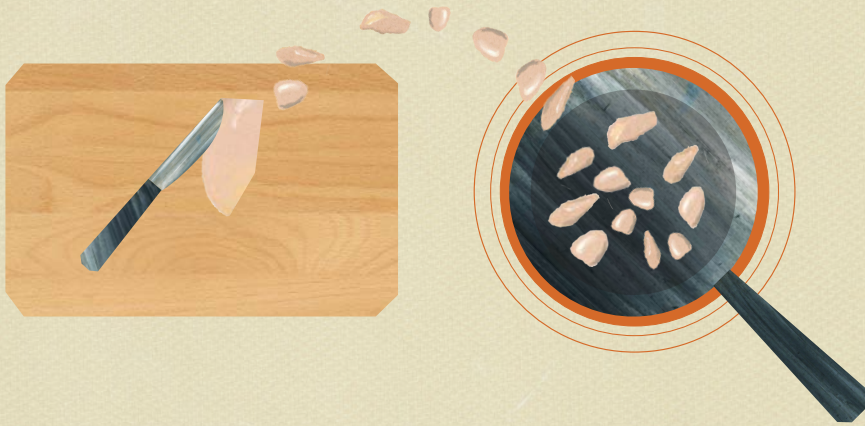
Wash and cut all vegetables



- meanwhile check the potatoes:
pour the hot water out when you
can stick a fork in them without
breaking the piece



Cut the chicken and bake in a little oil



Summer sticks

Make the sticks



Summer sticks



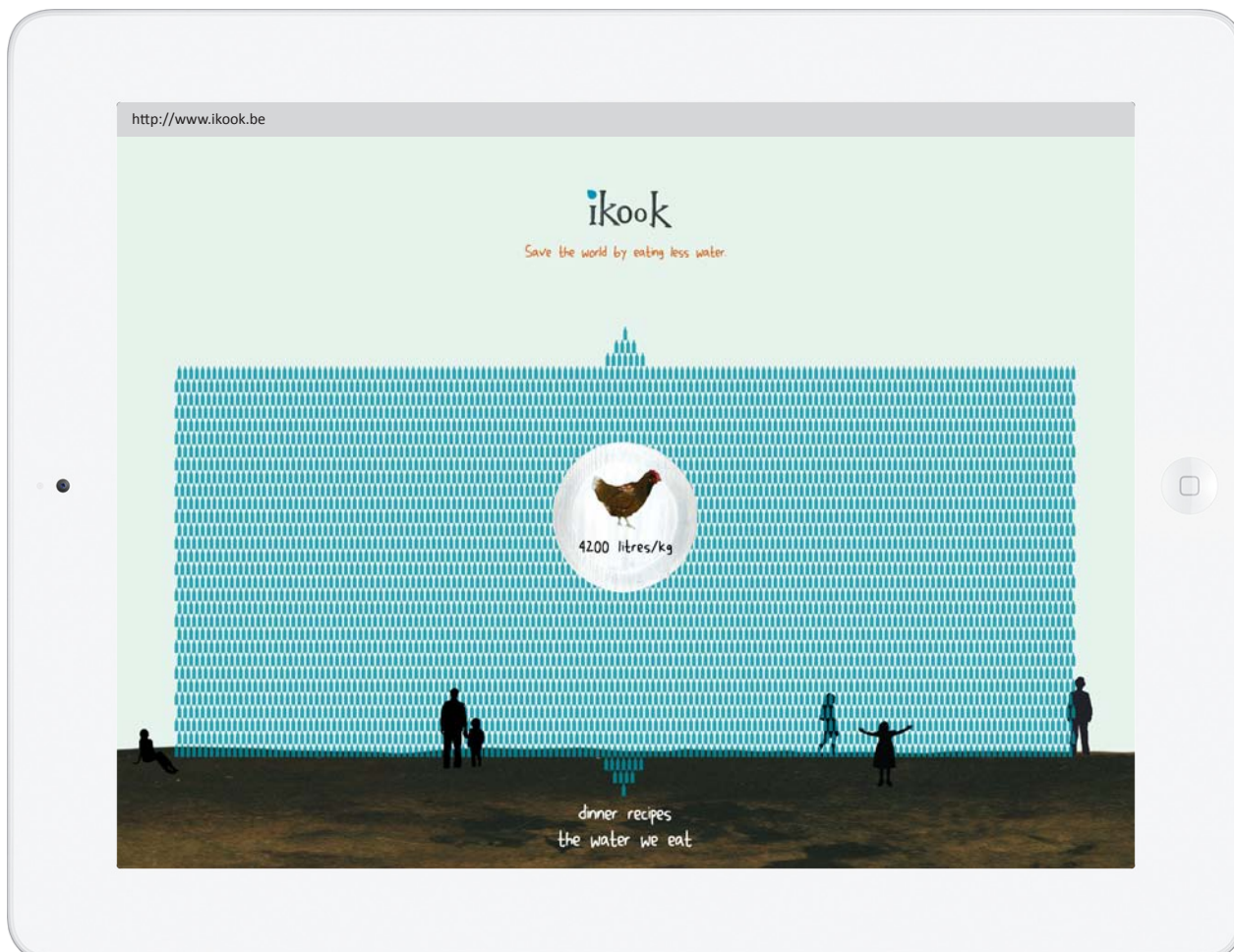
Also in the recipe, the semantics are too abstract and in general it looks too busy, too heavy.

5.8. A better design proposal

Based upon the remarks on previous proposal and looking back into the gatherings during the process, a new proposal for the landing front page and one recipe was made.

The landing page now looks like the image below. What you see is a wall of 1 liter waterbottles (on a very light green background) as high as the water footprint of the food on the plate. This food / wall size is a random factor, so next time you land upon the site, you 'll probably see a different one. When people touch the wall or logo they refresh this page and thereby a new random food and its water footprint is shown. When changing from one food, f.i. the chicken, to another, f.i. pumpkin, this happens in a really short animation. Stills of that are on the next pages. The bottles combined with human figures are the most clear way to visualise the huge or small amounts of water used. Even if people don't know whether or not it is 1 litre or half a litre bottles, it still looks like a lot.

The top and bottom "triangle" bottles are there symbolically: they reflect upon the water from the soil and the rain. They also break the squared character from the wall and the whole page and should guide the eyes a little to the two menu tabs in the soil. Yet, the one in the bottom may be confusing, so it is probably better to remove that one.



<http://www.ikook.be>

ikook

Save the world by eating less water.



<http://www.ikook.be>

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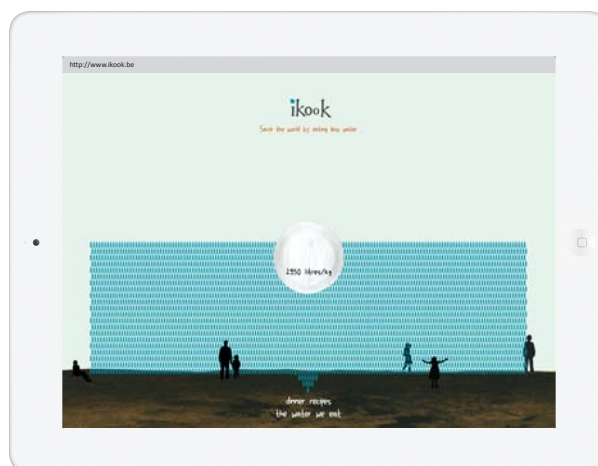
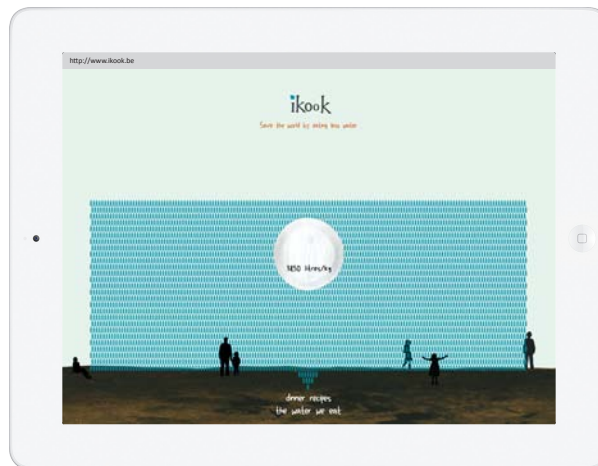
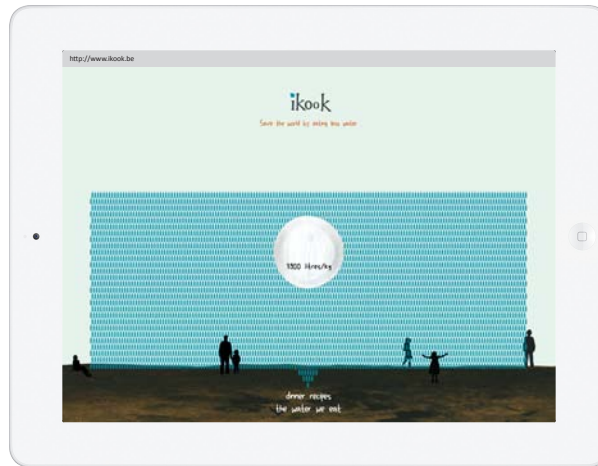
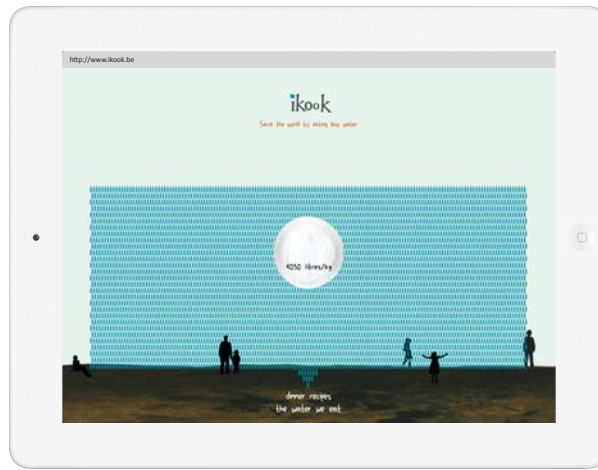
Save the world by eating less water.

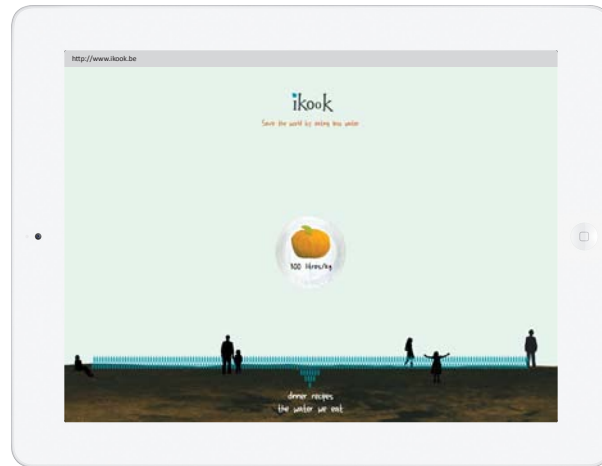
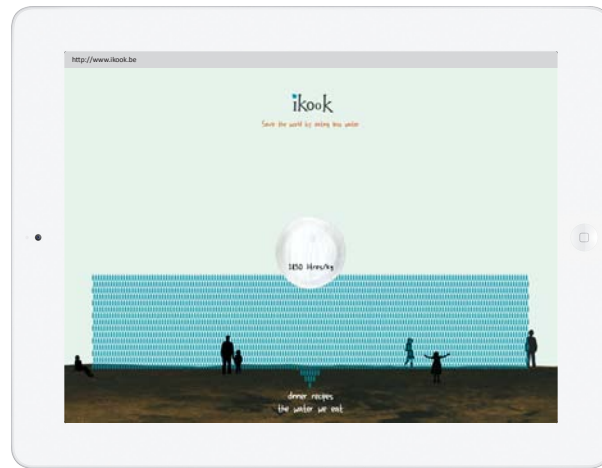


So, when changing from chicken to pumpkin, the wall quickly goes down line by line.

These are some screen shots.

This goes together with a sound: when going to a bigger volume of water, the sound is a more “threatening”, a more heavy classical sound (with more horn blowers etc.). When the opposite happens (going to a lower water volume): the visuals are accompanied by a sound which becomes more light, soft, positive (more light violins, piano, triangle...).

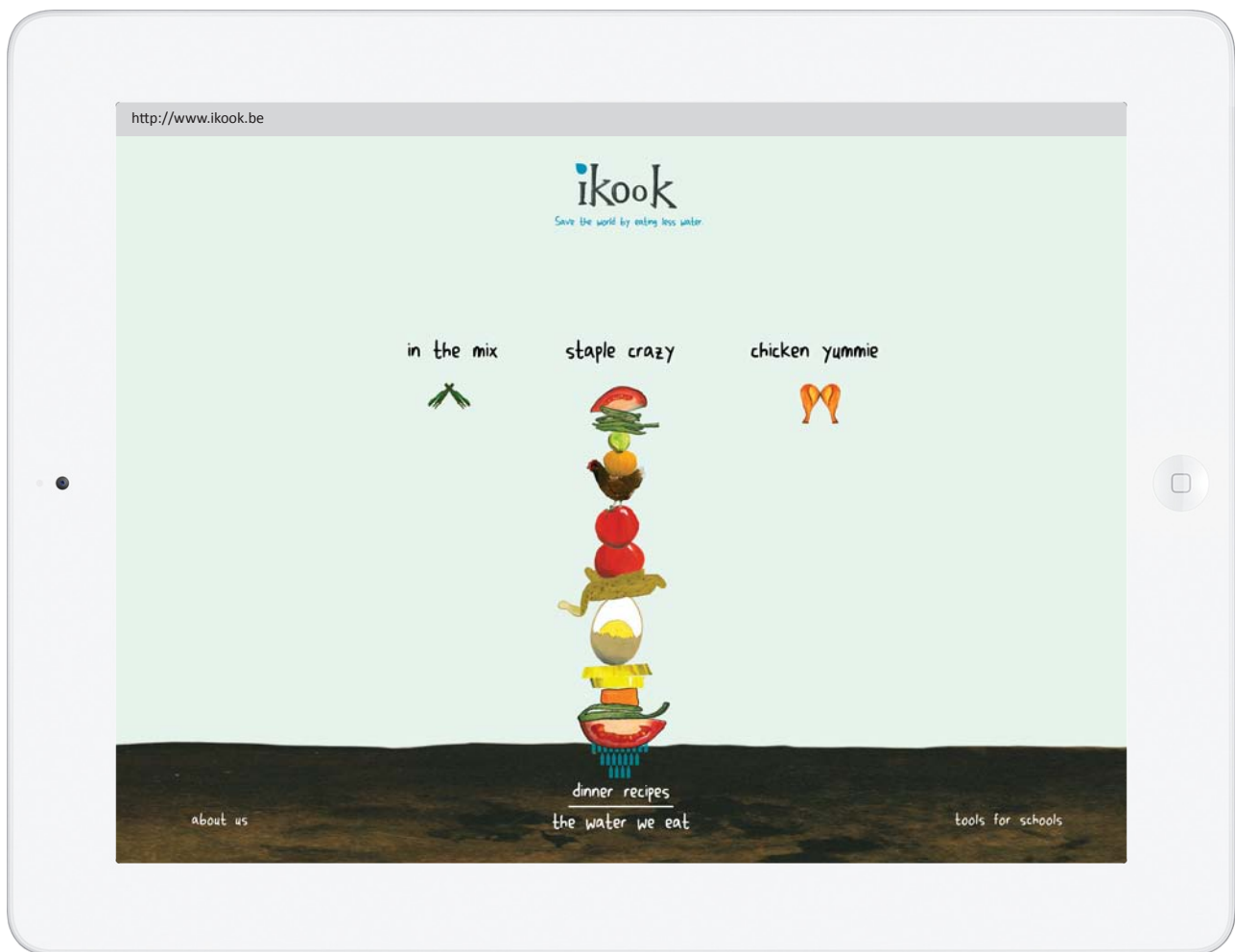




When people land on the front page, they may not know about this water footprint. Yet seeing all this water = 1 kg of food hopefully triggers them into questioning what it is and the huge volumes compared to the people hopefully create some kind of “wauw” or slightly shocking effect. When wanting to find out more, they’ll find that information in a game by pushing “the water we eat” on the bottom of the page. The game is not developed in this project.

Another key part in this are recipes, because in the end this is a way of making families eat with a more sustainable water footprint.

When pushing the “dinner recipes”, a choice between different recipe categories pops up. In Dutch these names are some kind of wordplay but translated in English they don’t really work that well. When entering the recipe section or the information section, other menubar items that are rather secondary will show as well in the soil.

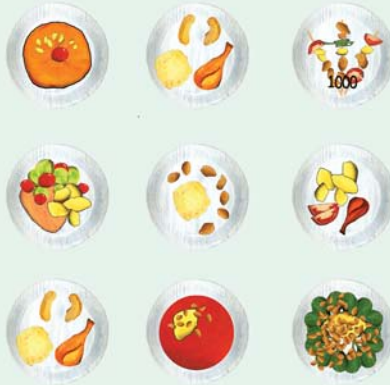


Behind each category are 9 recipes (see next page). Pushing once on a plate shows the amount of hidden water you eat, double push means going into the dish. People might not figure this out, so another (visual) solution so they know to go into it seems needed. Every recipe shows the amount differently, but it is always in some kind of playful way with a big block and at least one human figure to get a clear idea about the amount of water.

The water visualised there still looks like it is a lot if one does not have something to compare it with. The informational part will include comparisons with f.i. cow meat which has an extremely high water footprint, but having something to compare with so they know that the recipes are (rather) low water footprint seems useful. Pasta bolognese with minced cow meat can be a good standard dish to compare with (can be a plate on the left or right of page), yet one should be aware not to create a stereotypical top down “vegetables = good” - “meat = bad” dichotomy.

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Save the world by eating less water



in the mix

staple crazy

chicken yummie

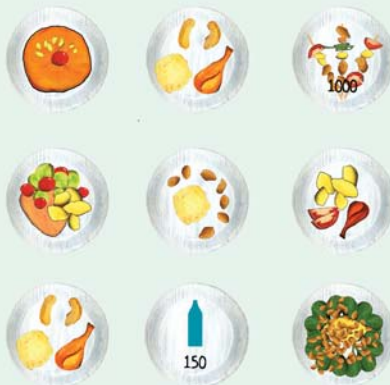
about us

dinner recipes
the water we eat

tools for schools

ikook

Save the world by eating less water



in the mix

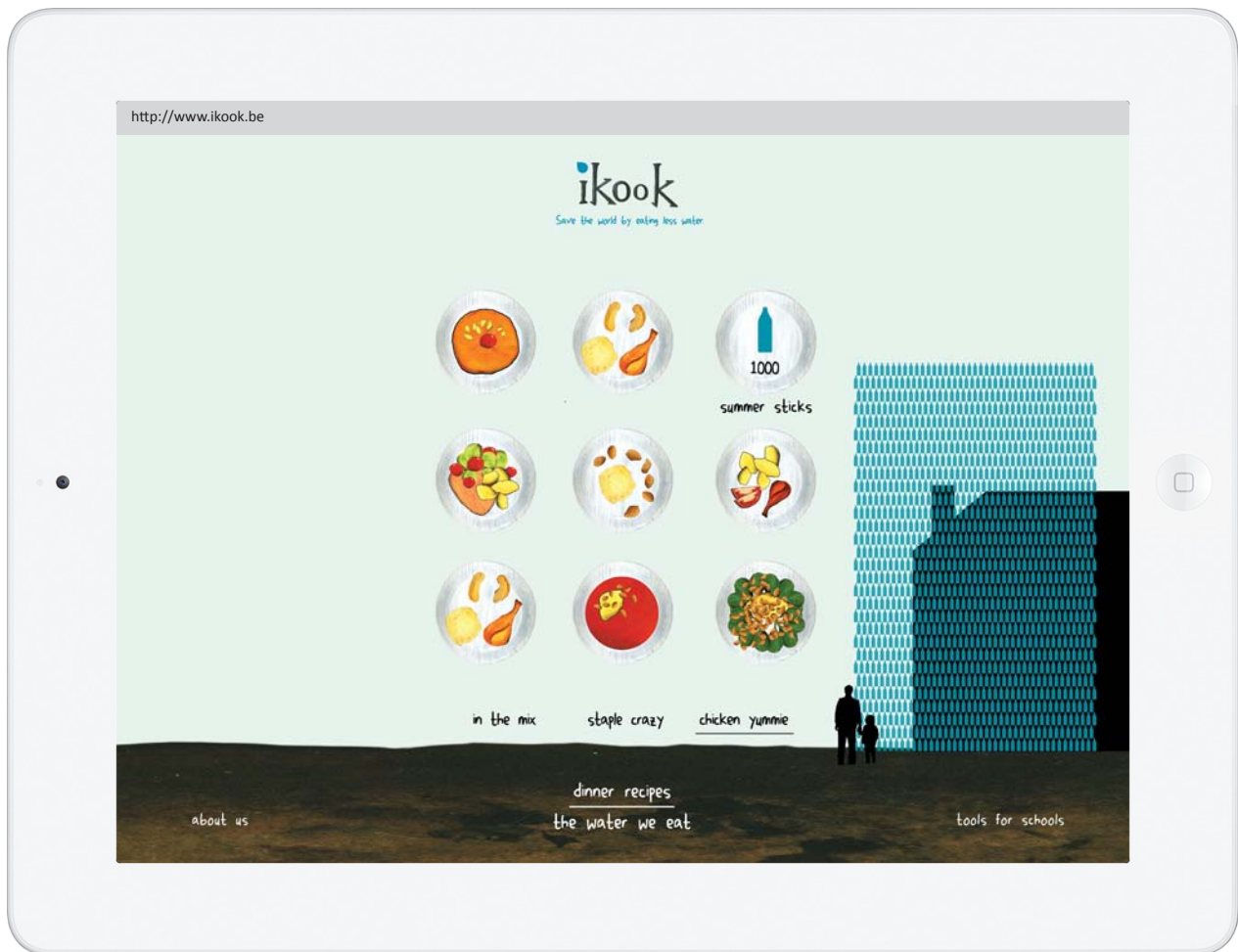
tomato soup with
a potatoe island
staple crazy

chicken yummie

about us

dinner recipes
the water we eat

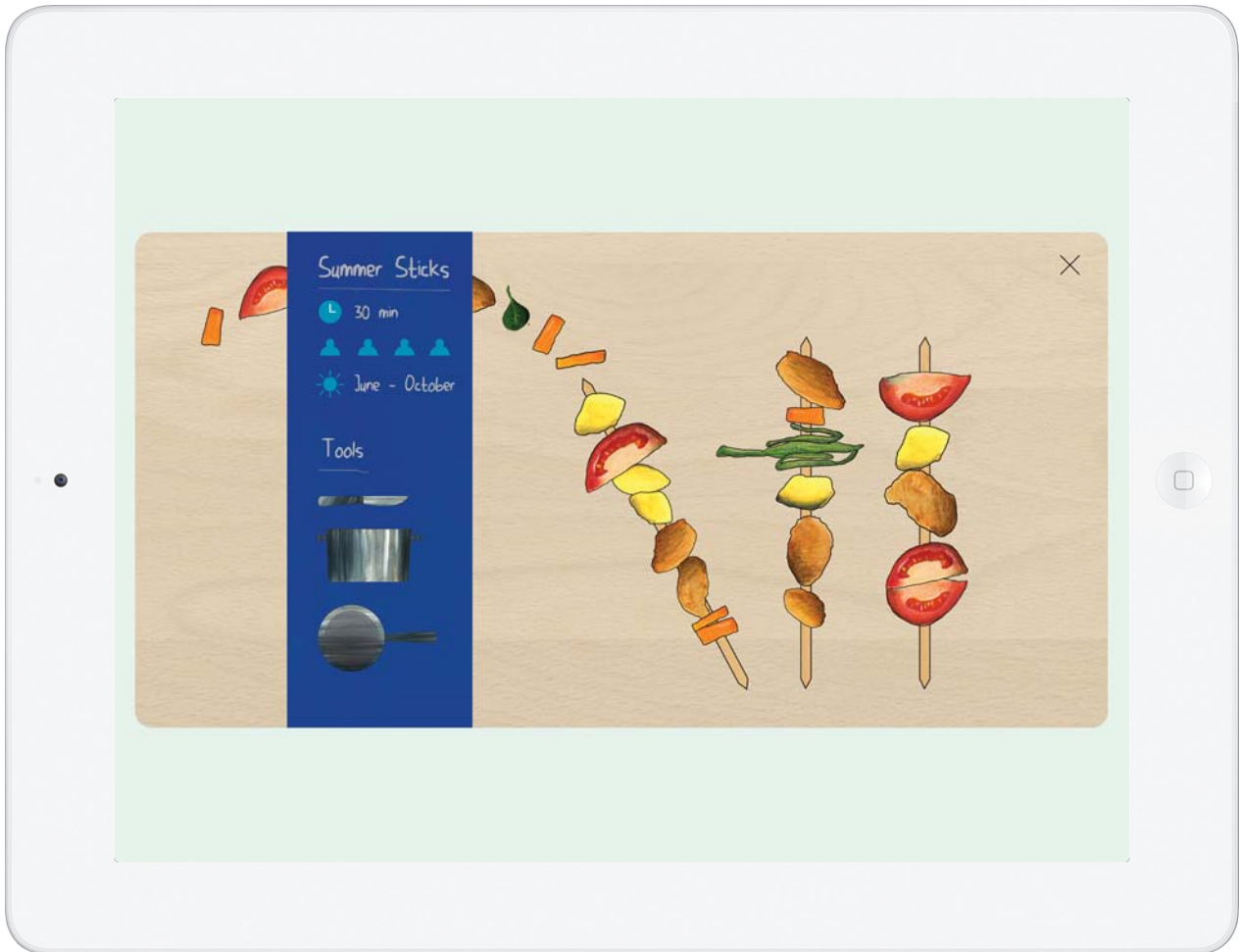
tools for schools



Thinking about the existing concept of composing your own dish, one can consider adding this here if it would be made in that way that there is way more variety than the example shown earlier and that it should be possible to go from your own composed meal to cooking instructions just like the instructions related to the existing recipes. Only then this “compose it yourself” seems to make sense because the visitor then can be a much more active participant and truly do something with his creation beside getting informed about hidden water amounts.

It is now when writing about this concept and changing it into something more active that it seems more valuable again. Before it didn't seem a proper idea related to change and it also gave the idea that I was stealing something. Now I see this concept can be used as a starting point and made better.

When going into a plate, the recipe pops up in a light box and just like in the previous proposal it is divided into steps. Compared to previous proposal this is lighter, less messy and because of implementation of very short yet functional animations it also becomes a bit more vivid. Decorational parts are minimal: if there are any they relate to the water footprint or to another food related interesting little fact. Next pages show all main steps, and in smaller pictures some screen shots of the small animations if there are any.



Take ingredients



3 tomatoes



400 g chicken ribs



3 potatoes



4 carrots

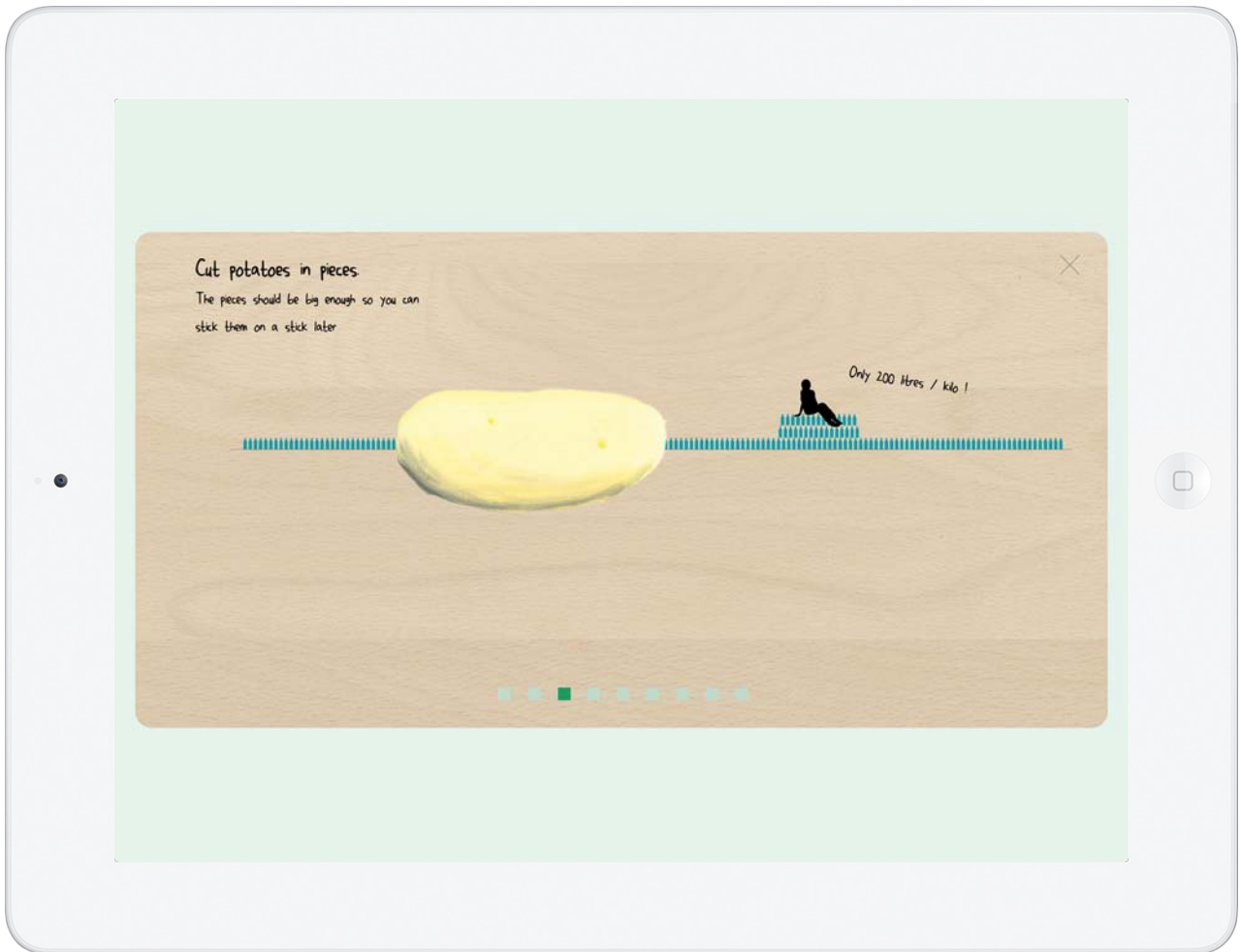


a handful of spinach leaves

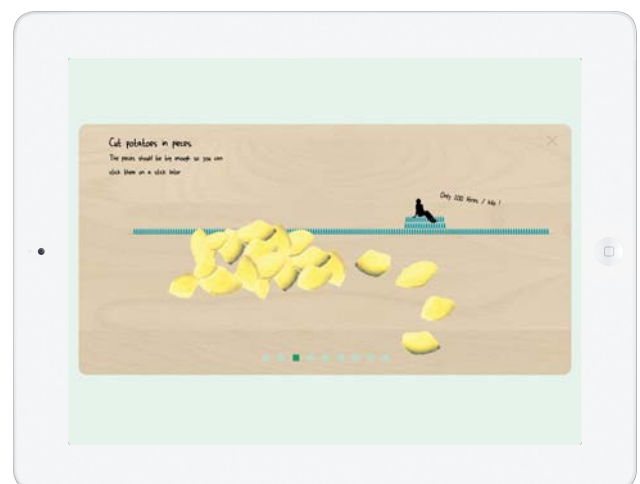
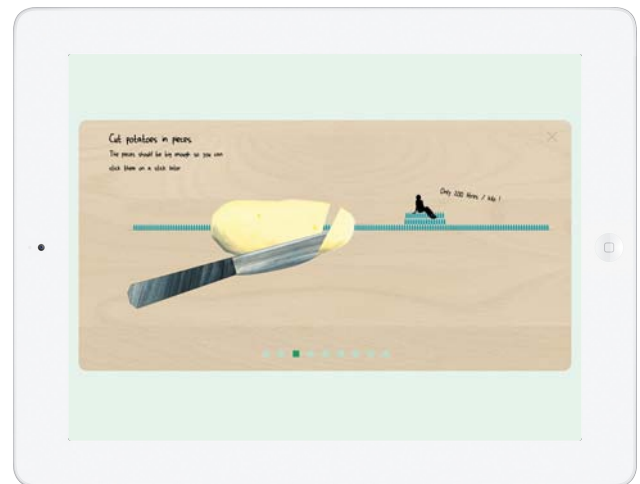
Makes your muscles grow!

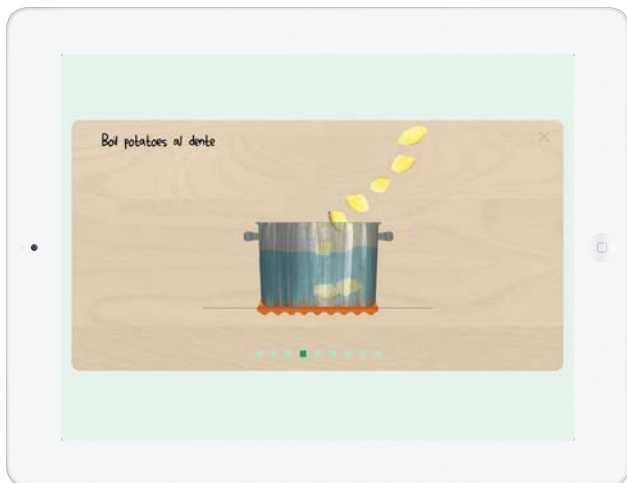
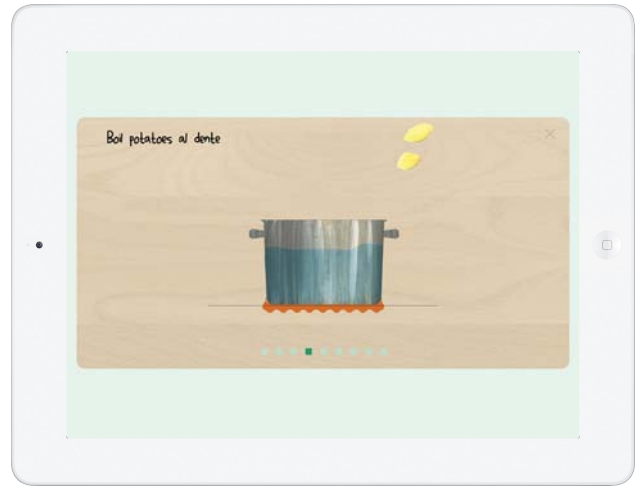
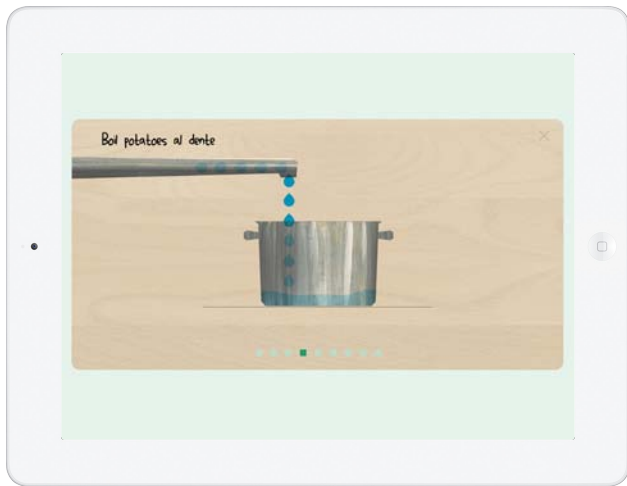


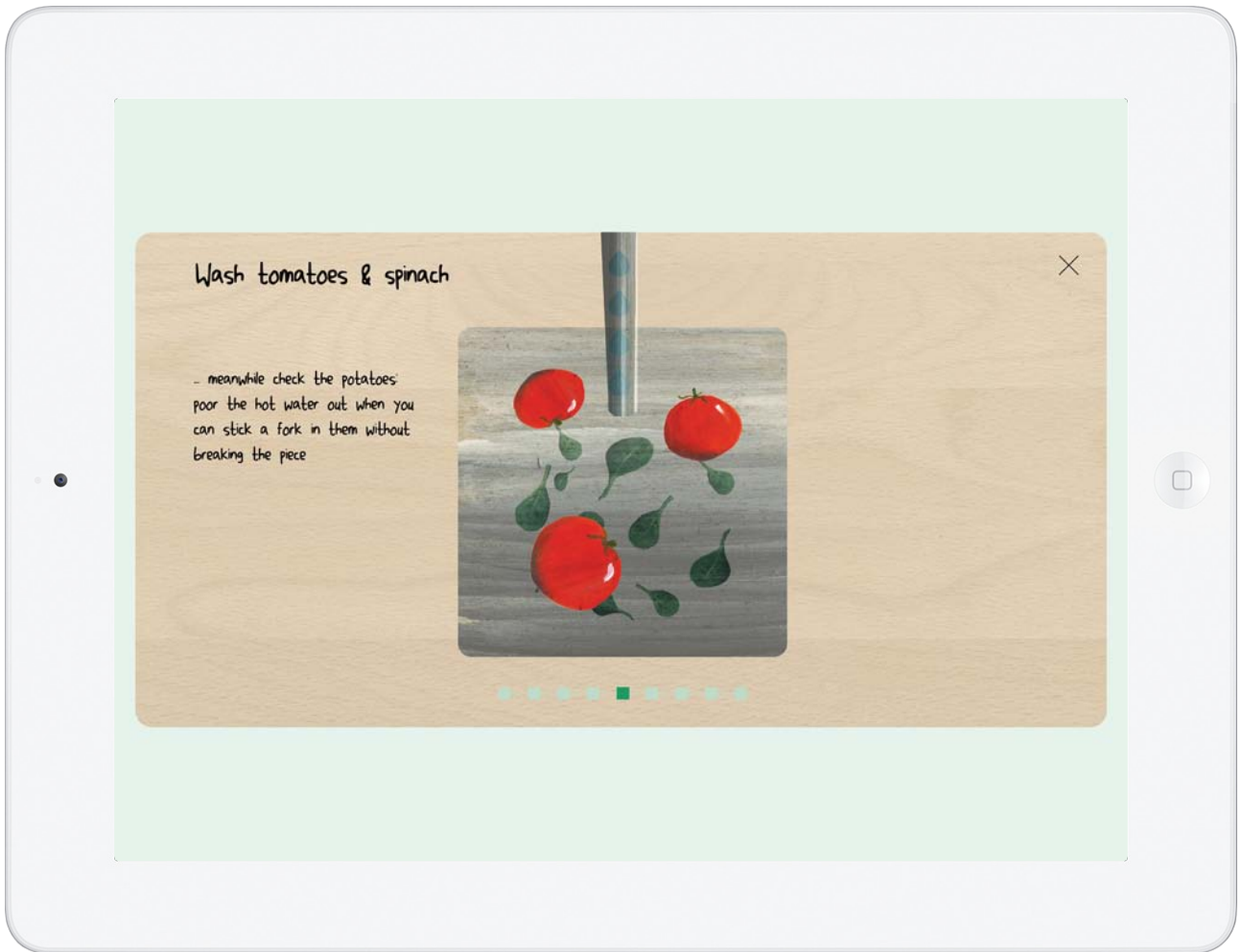




Each step tries to be clear and functional and should not look like a hard job. Adding extra decorations or fun things such as building with potatoes or so seemed to distract. Some steps can be accompanied by soft sounds: a mix of cooking sounds such as the sound of cutting, a “ping” from a microwave or the “pssssjj” of baking meat in butter might work nicely with some not food related sounds. Think of a funny sliding “woooooop” sound when you slide the pieces on the sticks in the final step of this recipe, a super fast or sometimes super slow vegetable cutting rhythm play or exaggerating splashing diving sounds when the potatoes are put into the water in the next step. The sounds should not be continuous all the time because it might be annoying. They are functional yet also funny.

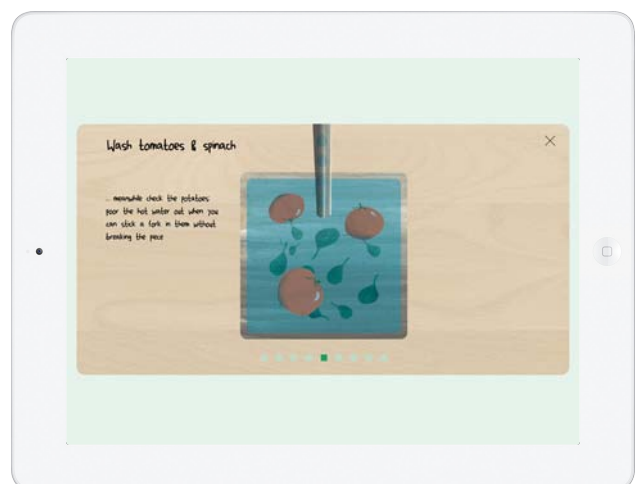
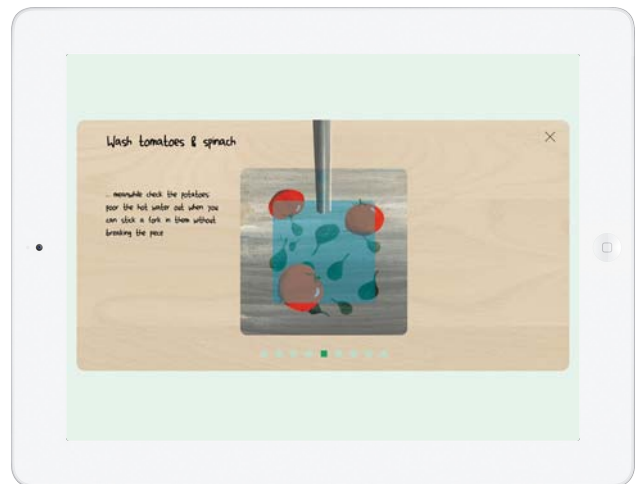


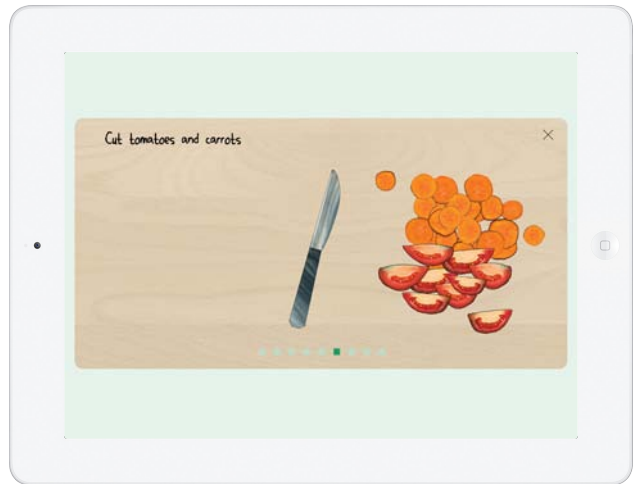
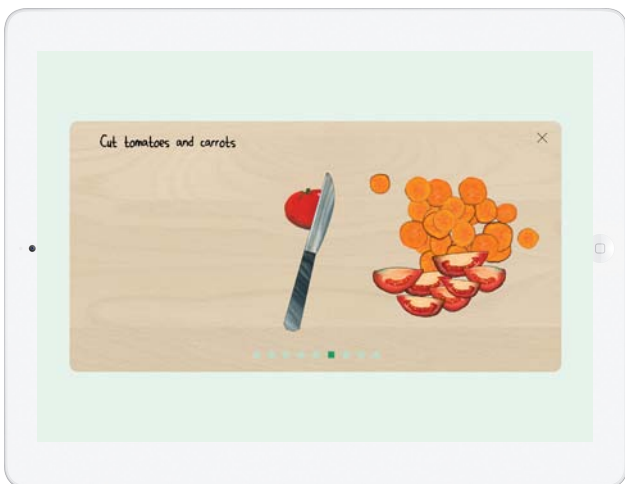
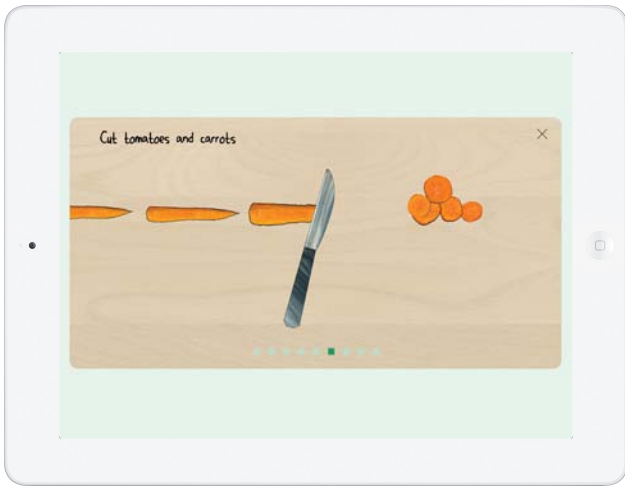




Sound of streaming water and in the end the funny “slurping sound” when the water disappears again through the sink.

The cutting on the next page should be in the same rhythm of the visuals and the speed that the cut food is piling up, so it becomes some kind of mini cutting jamming session.

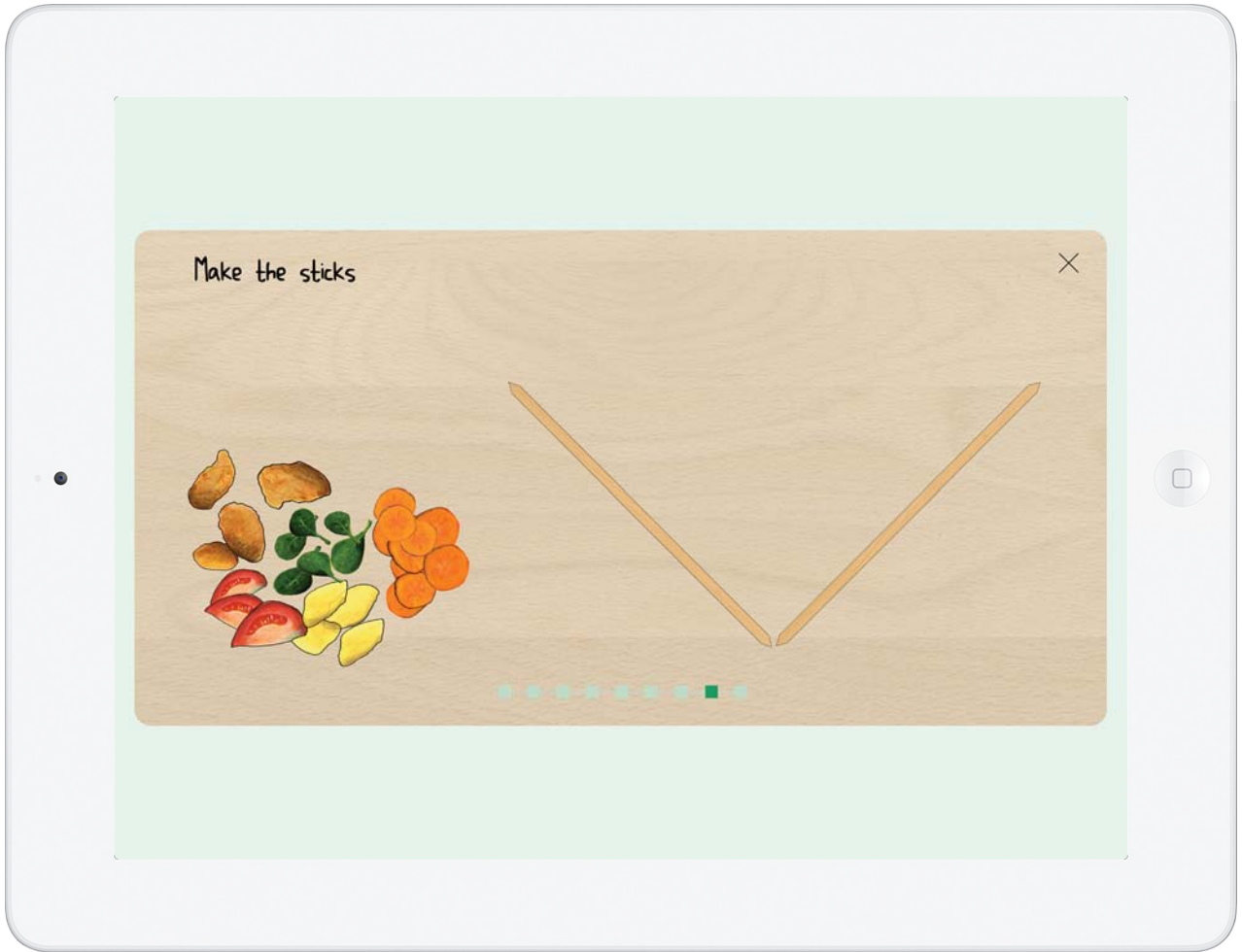




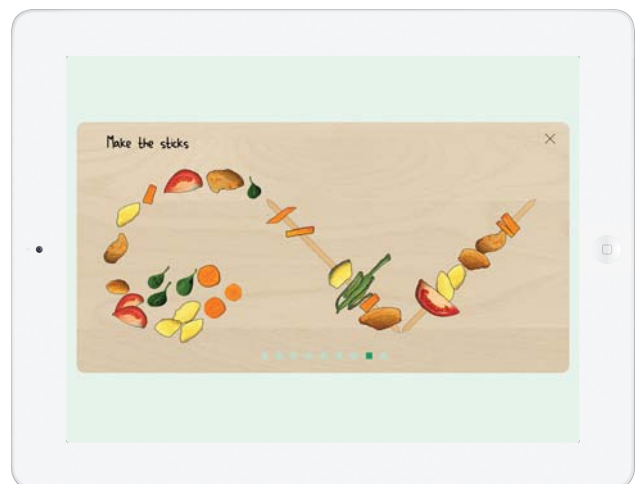
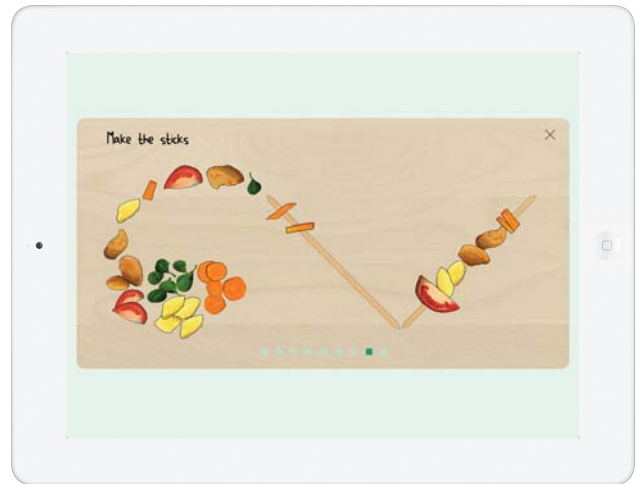


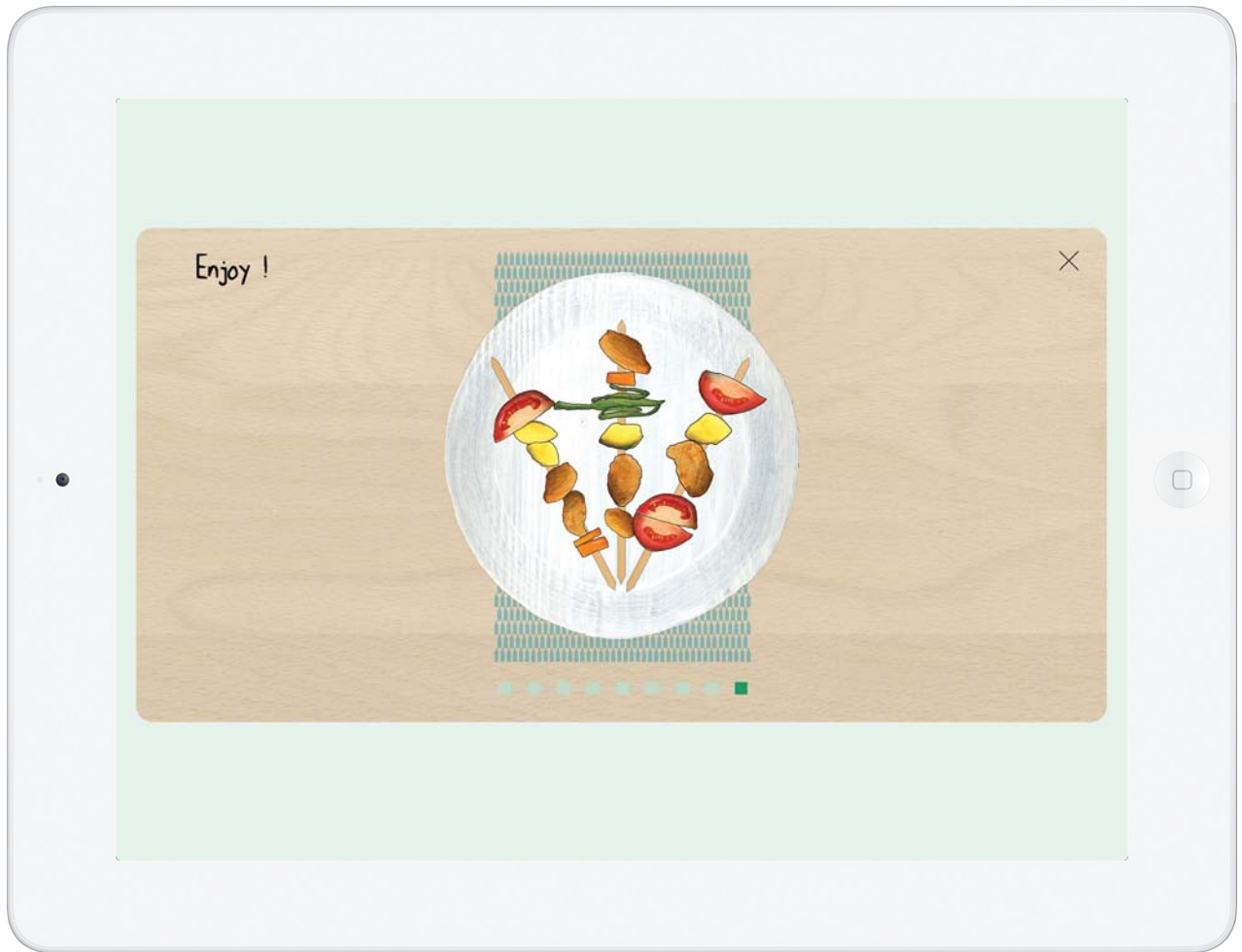
“pssssssssssssssssjjj..”





To be accompanied with funny “woooooop” sliding sounds.





The last step when the food is ready should always be combined with a bundle of joyful sound. Not all recipes should have the same sound for their “grand finale”. Over all the recipes it can be a big applause, happy trumpets, fireworks, the happy sound of clattering cutlery combined with classical instruments ... There are no real limitations for the possibilities here, as long as it supports a happy successful feeling.

This version can also be seen in the changed final presentation (attachment E).

6. REFLECTIONS

6.1. Reflection 1: The design issue of the project

To me, making graphic choices and finding valuable reasons why you make a certain graphic choice or why this is more fit for what you're aiming for than something else, has kept and still keeps me breaking my head regularly. Why is this visualisation "the best"? Isn't there another visual way that suits the purpose better? What feeling does this give? Who will be attracted by this? Also, when trying to find a style, I often confused this with structure. Those are 2 different things, yet they entangled very often in the beginning and still do at the moment of writing.

The question of "why?" also came up often when thinking about and sketching on the main structure of the website and the recipe. When one asks himself this "why?" question too much, the danger that none of the solutions seems good sneaks in. It is this that I'll need to be more aware of in the future and need to learn how to deal with it since it does not contribute to progress.

Though not really worked on, the food mobs are an essential trigger to start up an interest of both children and adults. But if they are fun, eye catching and yummy, then shouldn't (the visuals of) the website and the recipes be that too in order to engage them and try to create change into the family dinner? How do you make graphics fun when function and being clear is also highly important? Do you need to add "funny elements"? Is it because the general atmosphere of the visuals is light and joyful? Or because it all looks very easy to do? I still don't know the answer, and maybe there even isn't one, but it also might be that it is a mix of all different elements.

During the process, I saw the graphics as rather separate from my visionary goal for change. Now I realise that they go hand in hand with my design issue: how can I change behaviour with the graphical part? (and not only with the concept itself as I had been thinking for a long while) If I would have really realised that earlier, it might have turned out (slightly) different.

Relating to the design, semantics were important. Often symbols or other visuals, f.i. regarding to the water footprint, were too abstract of shape. This is probably due to my analytical and abstract mind. In future projects I really need to be aware of that right from the beginning. Keeping it simple and clear, there's nothing wrong at all with being "obvious" at some point.

6.2. Reflection 2: Relevance of the project to stakeholders

Though this project is not in collaboration with an organisation, there are of course stakeholders if this campaign would be further developed and implemented.

First of all the families with primary school children which are the main target group for the website and the recipes. Besides them, it is also important to reflect upon the kind of organisations which will be sending this website. It is not me sending it, but more likely with this kind of project it will be a group of environmentally related organisations which will join forces to make this work, probably in collaboration with some food companies.

It feels that those organisations often have a strong point of view, f.i. when it comes to eating meat or eating organic local seasonal produced food. Yet, if you f.i. would make this a meatless project, you lose a big part of your possible audience. Therefore, I think it is important for those organisations that, if they want to reach a broader audience than the families who pay already attention to more sustainable food, it is important to find a way in between when it comes f.i. to recipe content: there are recipes with meat, but only with chicken or once in a while pork. No cow meat, since that is meat with an extremely high water footprint.

For those organisations, this project seems a rather refreshing concept. It feels that they often focus on informational campaigns or websites without (inter)action. They start from information, but information does not lead to behavioural change at all. Starting with fun tasty food mobs, trying to find a joyful visual language with a minimal on information and as few text as possible might not appeal to the traditional segment of those organisations right away, but is worth a try if better developed.

The organisations who organise this kind of campaigns often do not gain directly from them. They don't sell food for instance, their aim is not to make money such as companies do, but to mobilise the community. Often they are government funded and budgets are limited. They often have a rather limited group of followers who share the same vision, so doing something nationwide like this which aims to be really popping and breaking the both children's and adult's view upon more sustainable eating is challenging. They will need to satisfy their traditional followers, yet opening up for more rock 'n roll as I call it to attract a new, broader audience, also children. Nicely put information does not work if it 's not happening in your backyard.

6.3. Reflection 3: Sustainability aspects of the project

From the start of the project, there was a clear relation with the world we live in. The ultimate goal is change of the family's dinner behaviour into one with a more sustainable water footprint. As the theoretical research has pointed out, the topic of change of eating behaviour is very wide and not always clear black and white science.

My overall concept proposal has not been tested yet since there is a need to develop it into every detail with a whole team with people with different qualities. There is no proof that this concept with the food mobs and so on will work, but since it is developed based upon valuable theoretical knowledge, it is likely going to impact people positively.

Regarding to sustainability of materials, the project can be made rather sustainable and in respect with natural resources as much as possible. The website should be hosted through an as environmentally friendly as possible resource and for the food mobs the use of second hand artifacts should be primary if there is a need for artifacts.

From an economical point of view, the food mobs might be sponsored through different food companies, yet it becomes more interesting if the whole campaign can be as independent as possible. Wouldn't it be a little hypocrite if one of the food mobs is for instance sponsored by a big mass producing potatoe company which uses unfriendly pesticides? On the other hand, smaller and maybe more organic potatoe farmers might not always have the financial power to sponsor a big potatoe food mob. In those cases it will be about balancing financial benefits versus ideological beliefs into a solution which suits the core values of the project.

Luckily, this is also the kind of project which can gain governmental support, yet it requires a good team to be worked through to start it up, but will also cost money to keep it going. Ideas might be tempered because of lack of the proper economical resources.

Regarding to ethical concerns the question whether or not it is the designer's right to stick its nose into people's dinners and in trying to "teach" people something. Everybody has different views upon how to live their lives, but how far can my very own personal beliefs give direction to a design project which aims for change in Flanders? During this project it has become clear that the involvement of a strong personal conviction sometimes makes it hard to balance a project, but also to take distance from a project. The project is not a "vegetarian only" project, nor does it aims to be very much top down to the people, yet avoiding the image of "the greenies wanting to change the meat eaters" is and will be an easy trap if this would be further developed.

The fact that the project is mainly focusing on mobile technological devices such as the recipes which aim at iPad use has kept me thinking and still does. The iPad is becoming more and more present in households and used by adults as well as children of all ages. The project does not want to promote mobile technical devices everywhere and I doubt that the more traditional green families will have an iPad at home, yet the project is not only aiming for them. It mainly aims at the bigger middle class families which does not have a very specific interest in more sustainable eating. From this point to open up the audience, a digital solution focusing on mobile devices seems the right decision.

6.4. Reflection 4: Process, methods and learning results of the project

The process of this project was one never to forget. First of all, it started out with a very open research question, which led to a lot of theoretical research, which then resulted in fewer time for the actual design work. This is not necessarily to be considered “bad”, but it has consequences. If I had known from the beginning that the design work of this project would be graphical and web thinking, I would have started the practical work earlier. Everything takes time and because of too little focus in the beginning, I put time and effort in conceptual details which didn't matter in the end. Also I realised during the project: the more one knows because of research, the more complex a solution may become. This is neither bad or good, but just something to be aware of. Putting half of my time into gaining knowledge about food, food change behaviour and so on did contribute to a more grounded overall concept and vision of how this project should evolve, yet the consequence was fewer time to spend on the other part. Having more theoretical knowledge about a certain topic gives you the opportunity to be more nuanced on conceptual details.

As I have a background with products and spatial design, I was not familiar with graphical design processes and methods. After the conceptual development, I just jumped into it without asking myself the question “Can I swim?”. When looking back at previous projects, I realise this is not the first time that I just jump into something without clearly realising the consequences. At one hand, this makes it harder for myself sometimes, on the other hand: it is while still at school that it sometimes should be possible to just jump.

But back to this project again. Even though consulting books and looking for mood pictures, I pretty much jumped into it without having a clear working method. Afterwards, that was not the best thing to do. Because even with some idea of where I might go, I missed the experience and the feeling with graphics as a design language. Besides, this second part of graphic development was actually starting a new project. The theoretical research had led to guidelines for the concept, which in their turn ended up in a couple of days of concept shooting and concept trashing to end up in the end with the overall concept as it is now. From that point on, the graphical project is a new project within the exam project. What tools to use to create the graphic identity? Who should this appeal to? What graphic styles are out there in the world? And at time important for me: what are my graphic possibilities and limits?

While trying to figure out a graphical style, the computer was the main tool in the beginning. It took too long time before I started to work really with my hands. Why? I don't know exactly. Maybe because I was afraid, or because I was thinking too narrow or ... The fact that I saw myself as a “bad graphic designer” was probably part of

that, because like mentioned before: in the beginning I was mainly working from what I considered my graphical limits and few possibilities.

When reflecting upon methods, talking to a web designer or an interaction designer would have been beneficial for the project. Beneficial because it probably would give more inspiration and knowledge in a rather short time. Now the knowledge and inspiration mainly came from looking and trying many different kind of websites, but also reading about how to make it work technically. When not being experienced into a certain field like webdesign, gaining professional advice would speed things up and give more answers.

Processwise, making mistakes is essential to me. Before finding a or the right way, a lot of mistakes need to be made. Because of them, you know what it should not be and you get a little closer to the end result. This was absolutely true for the graphical part of the process. Along the way I noticed how hard it is for me to make graphic decisions and to stick with those decisions afterwards.

7. CONCLUSION

This project started out with a personal interest in the ecological aspects of food and grew into a huge research question. When looking back now, that question was maybe not the ideal question if one tries to answer that question. Asking yourself that kind of big questions or a question of which the answers will probably lie beyond your own power may not always be satisfying at every point. Yet, it has guided the project and me throughout the past four months where the journey and the many lessons learned about myself and design will be worth remembering for a long time.

Questions like the one in this project about behaviour change of eating or opening up the image of vegetarian food are not new though, nor will this be the last project dealing with these issues. Each attempt might bring us closer to a way in how to create positive change, yet I believe it will always raise new questions and issues that individuals and society have to deal with. There is often more than one possible solution, yet this food mob based project about making families eat with a more sustainable water footprint is an attempt from my perspective.

Considering the fact that water footprint is not yet mainstream knowledge, I expect that other projects will pop up in the near future, aiming to inform or positively change eating behaviour from all kinds of angles. I look forward to see what their answers are and to see where there are possibilities to join forces. Until then, this project can be worked out more and I can be happy to make my personal daily water footprint difference.

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9. ATTACHMENTS

I drink about 560 litres of water for breakfast. And you?

How can I effectively change children's & adult's food consumption into one with a better water footprint?

Trying to find a way to effectively inform and change children's and adult's food consumption into one with a better water footprint.

What is the project about?

Direct content

The theme of the project is the water footprint (also called virtual water) of our daily food consumption. What does that mean? Simplified it is the total volume of freshwater that is used to produce the food you eat, f.i. to produce 1 kilo of cheese it takes around 5000 litres of water, to produce 1 kilo of apples around 400 litres, 1 kilo of beef around 15 000 litres etc.

That content will be deepened and put into some kind of designed experience. In my previous projects about similar themes, I often had a type of end result in mind ("I am going to make a product about this."). However, one can put questionmarks with that way, because what is a good method to provide environmental related information? How can I try to change eating behaviour for the better? ...

So, during this project I will do the opposite: I keep the end result open and first start digging into the theoretical layers underneath: the research content.

Research content

In order to try to reach my goal, it is needed to gain more knowledge and insight into the topics that this project touches upon. These are the targeted children and adults, food choices and food "thinking", (change of) behaviour, environmental education (EE) and food education (FE). To structure and guide me through that research, I am developing a research mindmap (attached at the end of this project description) and a list of resources to look into (also attached) which is in continuous development.

Most branches of the research will be dealt with in general in relation to the subquestions in the research mindmap. In the fields of EE and FE though, I will probably also look into some case studies and (case) study reviews where they have tested and evaluated different methods on their impact of the participants. Though case studies have limited scientific meaning since the results cannot be generalised or copied to similar contexts, they might be worth a closer look anyhow. Reasons for that is: as far as my search for articles about methods for EE or FE goes now, I get the idea that there hasn't been much quantitative research done on their impact, especially not in Western European context. Therefore, a critical look at some as-relevant-as-possible case studies might give a bit more a hint of what aspects may contribute to success / failure in EE or FE.

Parameters for choosing the research method case studies and case study reviews are:

- * Does it involve some kind of active participation of the targeted people?
(since active participation is more effective for learning than a passive one)
- * Variety of methods in the total amount of case studies I look into.
- * Age relevance: are the children in the case study approximately the age I am mainly aiming for in my project?
- * Does the method evaluation reflect upon the attitude or behaviour of the targeted people? (so not only about knowledge of the participants)
- * Location: preferably studies from western Europe since that will be the rough context I am aiming for with my result (as in: aiming for Belgian or Swedish society).
- * Time span of pre- and post testing of knowledge, attitudes and / or behaviour: post testing preferably at least a couple of weeks after the intervention to evaluate the impact of the EE / FE intervention.

Additional to that theoretical research I will look into some contemporary examples related to food and food education from all over the world which have not been evaluated. Reason for that is to get a little bit an idea what kind of projects are mainly out there in society and to be inspired.

How can I effectively change children's & adult's food consumption into one with a better water footprint?

For whom?

The direct end result

* children: main targetted age: 6 - 9

* preferably also their adult caretakers (usually parents)

The process behind / the research results

This might be interesting for adults who have in one way or another to do with this: teachers, exhibition designers, people who decide upon the curricula for children, cultural institutions ...

If I will involve children in the process of designing the direct end result, that process and the results should be interesting for them as well off course.

The project will probably be intended for Belgian society.

What type of project?

This is a free project (no client or collaboration).

What kind of expected end result?

The direct end result

It will be an interesting experience in some kind of designed way, probably some kind of 3D since that is my usual work field. What kind exactly depends on the results of the research, so until then all possibilities are open. I do believe though that the end result of this project should be realistic - though it may be conceptual at some point -, as specific and clear as possible within the short time frame of this exam project and - based upon my previous experiences - probably also not really moralising and not (too) artistic.

Based upon my research uptill now, I can say that the designed end result will probably be part of some long term vision and project upon different levels of society. It will probably raise new questions and open up possibilities for further development.

The the research results conclusion(s)

This will be visuals and text, some kind of mapping probably.

Why? Relevance for whom? Relation with society?

Direct content

Pretty much everybody eats food and all of us have reasons why we eat this or that. For (primary school) children, taste is the very most dominant factor if they can choose freely. In reality though, their food choices are among others often overwined or codecided by their caretakers, who often have other, additional reasons for chosing this or that food. Therefore it is important to aim for both adults and children. Since we won't have clean freshwater forever that can be used for food production, water is actually precious. Putting up the use of virtual water as one of the reasons for (not or less) eating certain products / eating more of other products can be a new, weird or too far fetched reason for some people, yet I believe it is not bad nor unimportant to be at least informed about this topic which hasn't been into mainstream attention so much and even for me to try to aim for change in eating behaviour through a designed way.

Research content

Being educated as a primary school teacher for 2 years, having shifted to product design education after and finishing in child culture design with a specific interest in socio-ecological education now, a final research project like this seems to be logical in my personal development and interests, but also valuable for society. As mentioned before, the results of the research content might be interesting for all kinds of people which are in one way or an other dealing with the topics this project touches upon. Having started the theoretical research while writing this project description also gives me the feeling that there are still a lot of questions unanswered related to the touching topics such as food and education.

I hope this project can be a small step towards more answers, new questions and a little bit of change.

How can I effectively change children's & adult's food consumption into one with a better water footprint?

Goals

Direct content end result

- * a) Make people aware of the fact that there is a lot of water needed for food production. (information)
- b) Make people aware of the fact that some products need much more water than others or use water in a wasteful way during production, which is often harmful for the environment. (information)
- c) Make people aware that (eating products which are) using less water in general is better than a lot. (information)
- * Visionary goal: try to change people's eating behaviour for the better: a food water footprint which is less harmful for the environment than their previous water footprint.
- * Provide an interesting experience.

Research content

1. Find out if there are any key elements or methods to successful EE and failing EE + why?
2. Get a better understanding of possible ways for EE.
3. Idem point 1 and 2 for FE.
4. Idem point 1 and 2 for behaviour (change).
5. Get a better understanding of children's food culture and the factors which influence their food choices.
6. Idem point 5 for adults.
7. Find out if there have been any successful educational projects about the water footprint. If yes: successes? Failures? ...

Personal goals

- * Develop my theoretical research skills better.
- * Develop my socio-eco educational design skills better.
- * Get to know more practical information about the water footprint for myself as a food consumer.

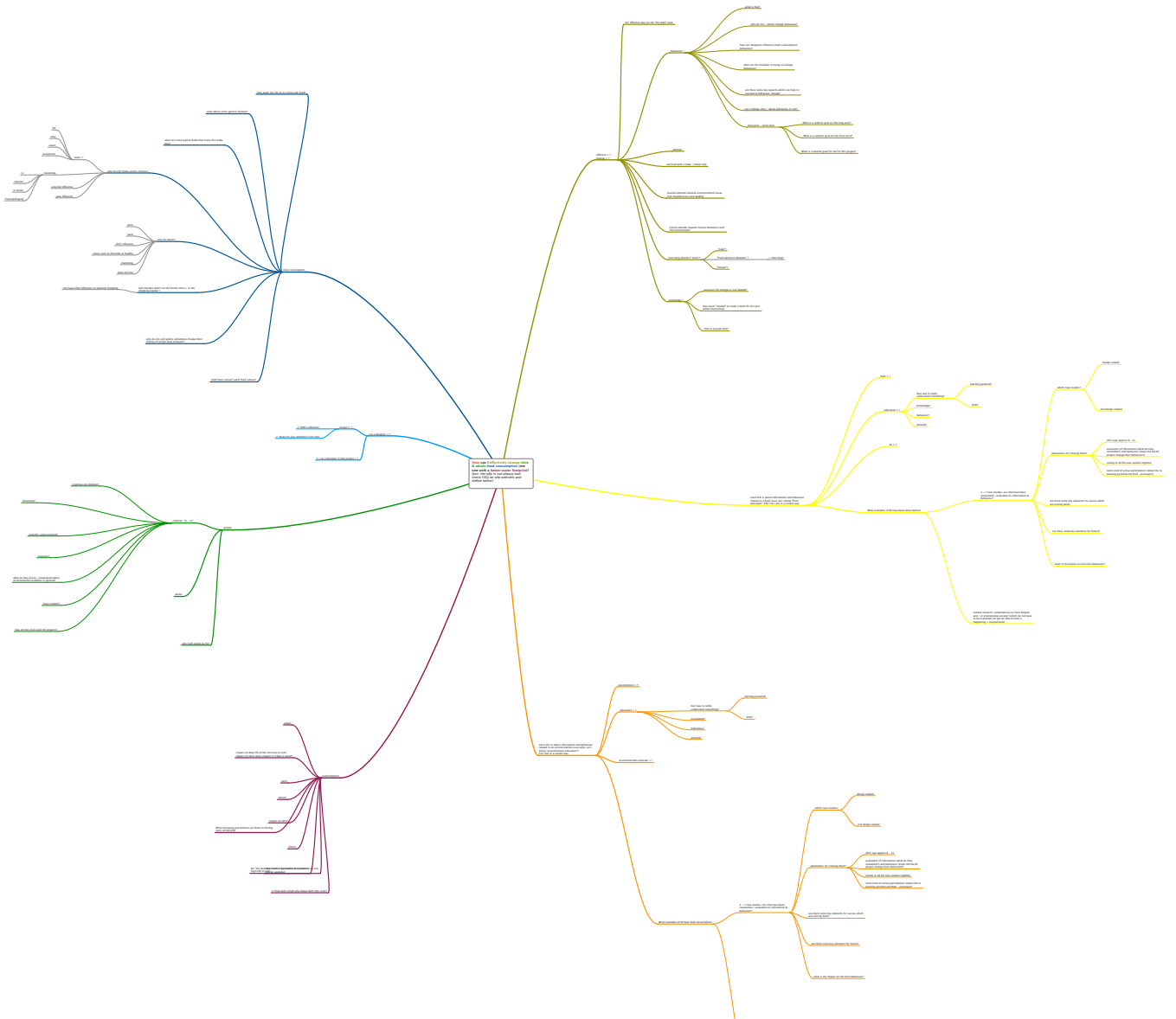
Research question

How can I effectively change children's & adult's food consumption into one with a better water footprint? (additional questions relating to this can be found in the attached research mind map)

Project plan

see attached schedule

Attachment B



(zoom in to be able to read)

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Top 10 Mistakes in Behavior Change

... and some ways you can fix them

Stanford University

By Dr. Prig, Kara Chansayak, Margherita Quilici, Yvonna Morrongi, Jason Irtsha, & Mark Nelson

Top 10 Mistakes in Behavior Change

#1 Relying on willpower for long-term change

Imagine willpower doesn't exist. That's step 1 to a better future.

By Dr. Prig, Kara Chansayak, Margherita Quilici, Yvonna Morrongi, Jason Irtsha, Mark Nelson at ...
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Top 10 Mistakes in Behavior Change

#2 Attempting big leaps instead of baby steps

Seek tiny successes -- one after another.

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Top 10 Mistakes in Behavior Change

#3 Ignoring how environment shapes behaviors

Change your context & you change your life.

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Top 10 Mistakes in Behavior Change

#4 Trying to stop old behaviors instead of creating new ones

Focus on action, not avoidance.

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Top 10 Mistakes in Behavior Change

#5 Blaming failures on lack of motivation

Solution: Make the behavior easier to do.

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Top 10 Mistakes in Behavior Change

#6 Underestimating the power of triggers

No behavior happens without a trigger.

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Top 10 Mistakes in Behavior Change

#7 Believing that information leads to action

We humans aren't so rational.

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Top 10 Mistakes in Behavior Change

#8 Focusing on abstract goals more than concrete behaviors

*Abstract: Get in shape today
Concrete: Walk 15 min.*

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Top 10 Mistakes in Behavior Change

#9 Seeking to change a behavior forever, not for a short time.

A fixed period works better than "forever"

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Top 10 Mistakes in Behavior Change

#10 Assuming that behavior change is difficult.

Behavior change is not so hard when you have the right process

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Top 10 Mistakes in Behavior Change

Thanks for viewing!
Feel free to share this with a friend.

For a method that works, click the blue link.

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get the info
via a 'supermarket' or
chain of big
shops to provide

most styles
of advertising in shops
(mostly multi-brand)
pop up in supermarkets

food market & info
to reach the brands

when a website

spread a website
w/ pop up on friendly
screens

a good combination
of exposure techniques

- in places
- as much as possible
- like & adults
- of major social
- channels

how to inform people
about wfp in food
(market)
(ground)

drive/travel
around with
some level of
wfp info - billboard
on your
car/bike

apples @
libraries
and other
cultural h.
centres

make a spread
wfp msg +
music

do it every
→ results

take all
high wfp food
out of your
supermarkets
ad. : promote all low wfp
@ supermarkets

radio commercials
(online)

post position
high & low
(priority)

economic side
to label of
wfp attention

format
face
addressing
it

to show
reducing
to commercial

exhibitors:
travelling through
the streets

a big name
played through
the country

music preferences

ikook

Save the world by eating less water.



***concept for a campaign about eating
with a better water footprint***

content for today

- ◆ what is the water footprint of food?
- ◆ my context & goals
- ◆ my research question
- ◆ main guidelines for the concept
- ◆ campaign concept

main focus

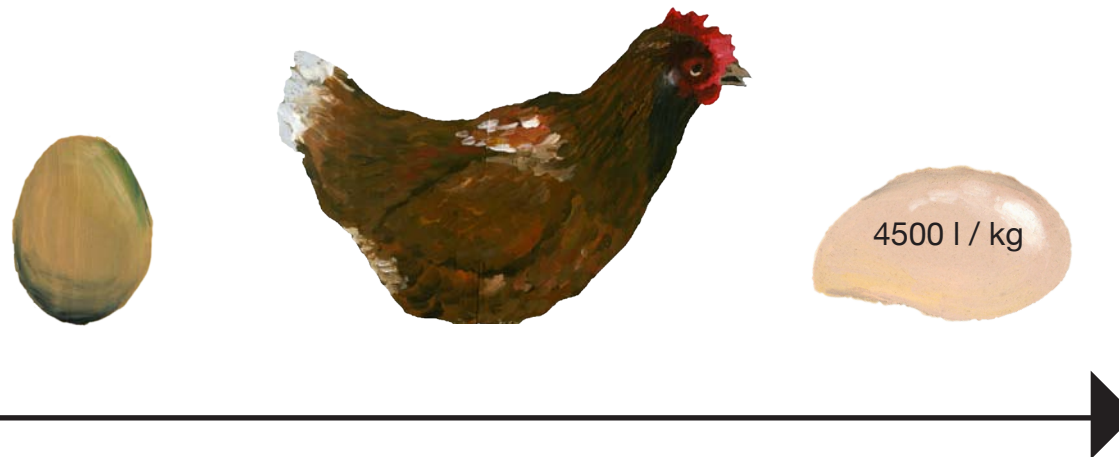
- ◆ development of logo, style, structure ...
 - ◆ result: homepage
 - ◆ result: recipe example
-
- ◆ questions

what is the water footprint of food?



The water footprint of food is **the approximate total amount of water that is used throughout the whole production chain**: from the beginning of production until the end product.

The concept of the water footprint is a **measure**, usually in litre / kg of food for the **hidden water** that consumers do not see.



what is the water footprint of food?

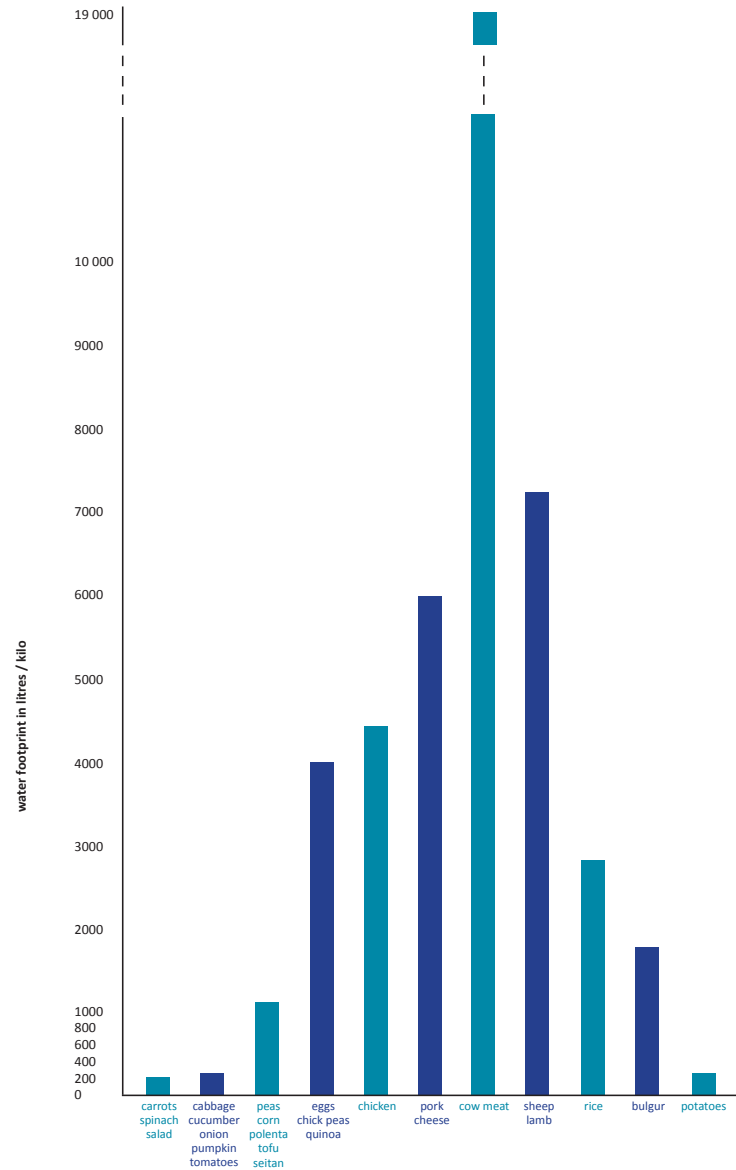


280 l / kg

≠



4500 l / kg



what is the water footprint of food?



280 l / kg

≠



4500 l / kg

how?



decrease of meat consumption



increase of local AND seasonal vegetables / fruit

my context & goals



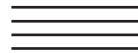
families with primary school children



my context & goals



families with primary school children



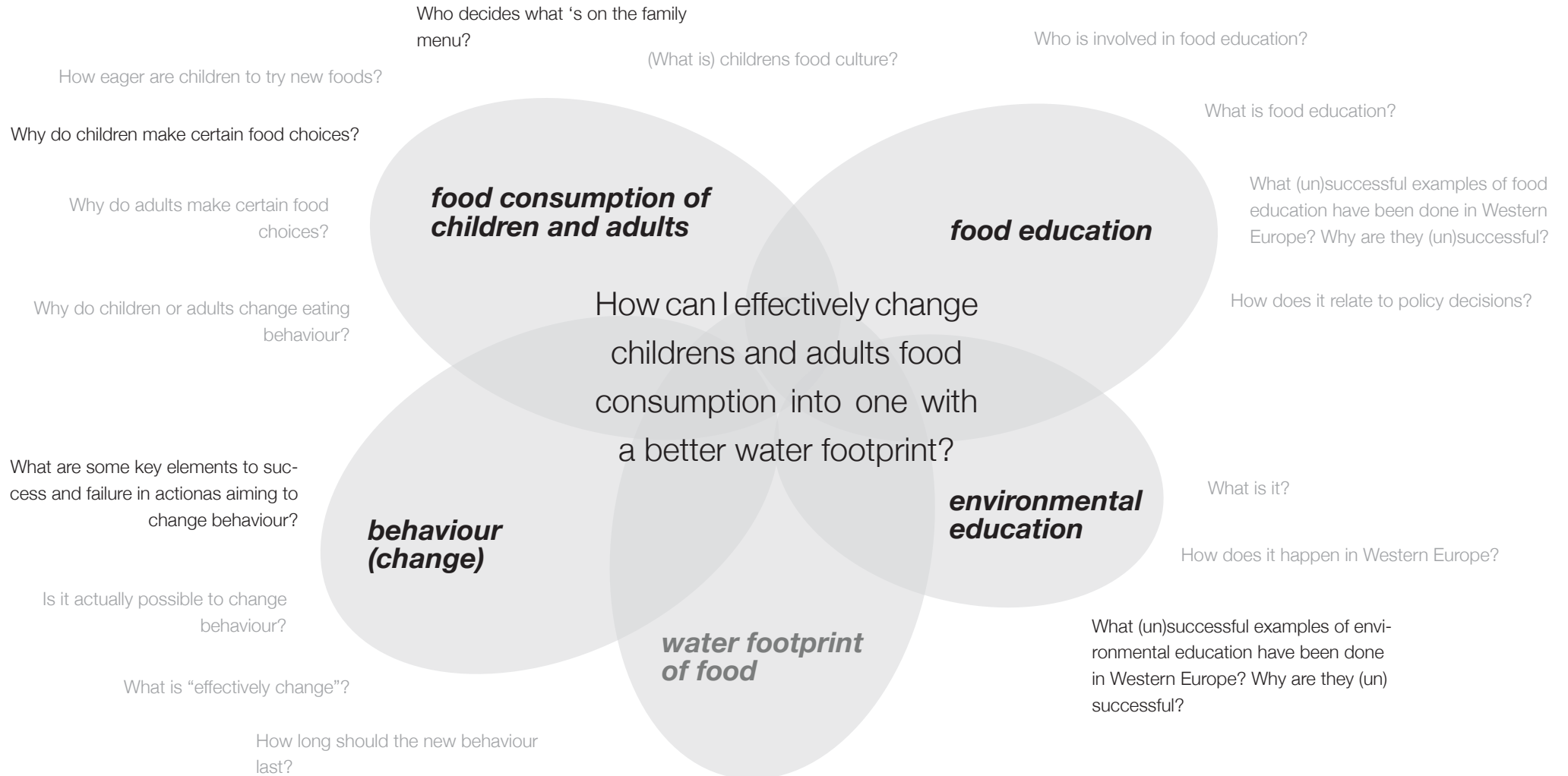
inform about water footprint
change behaviour

my research question



How can I effectively change
childrens and adults food
consumption into one with
a better water footprint?

my research question



main guidelines for concept



taste:

exposure, preference learning,
you eat what you like



repeated actions



curiosity / triggers



new positive behaviour



concrete behaviour

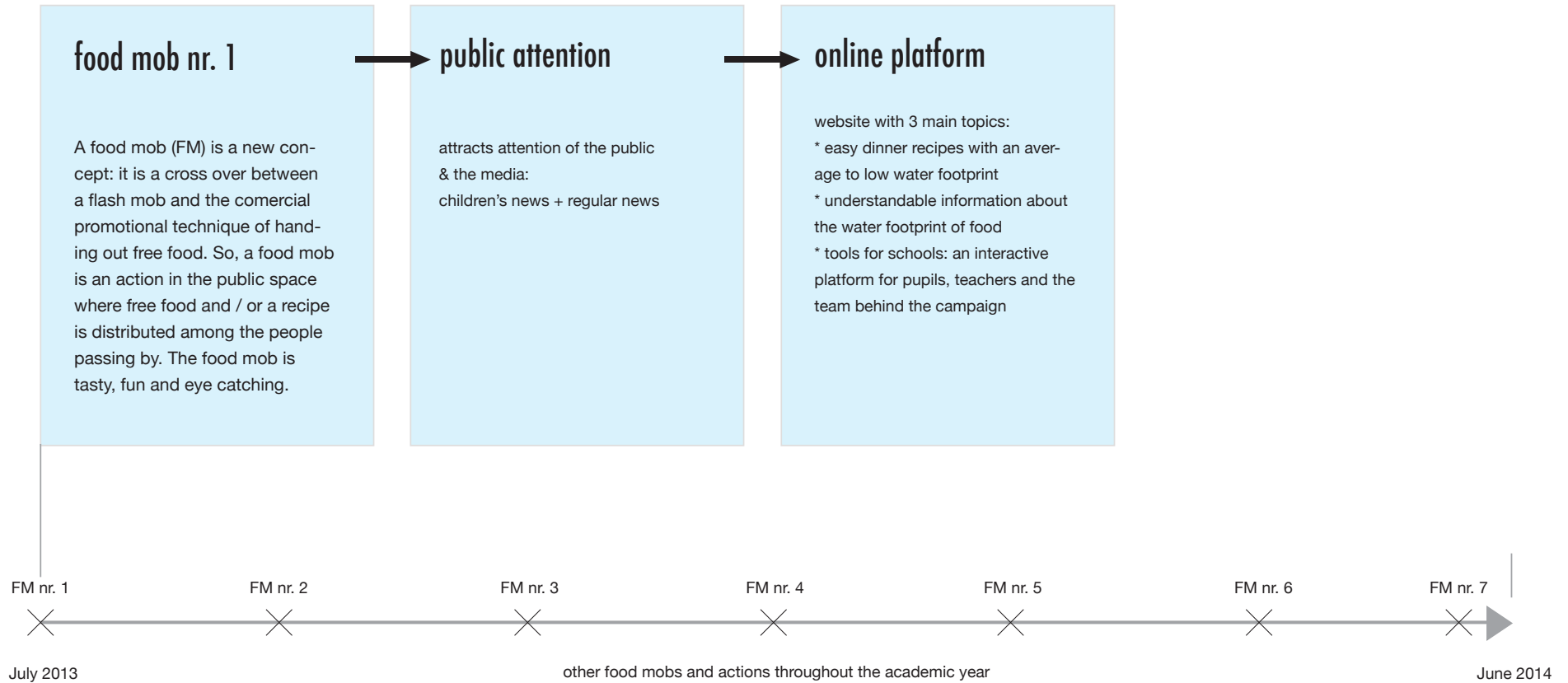


easy behaviour

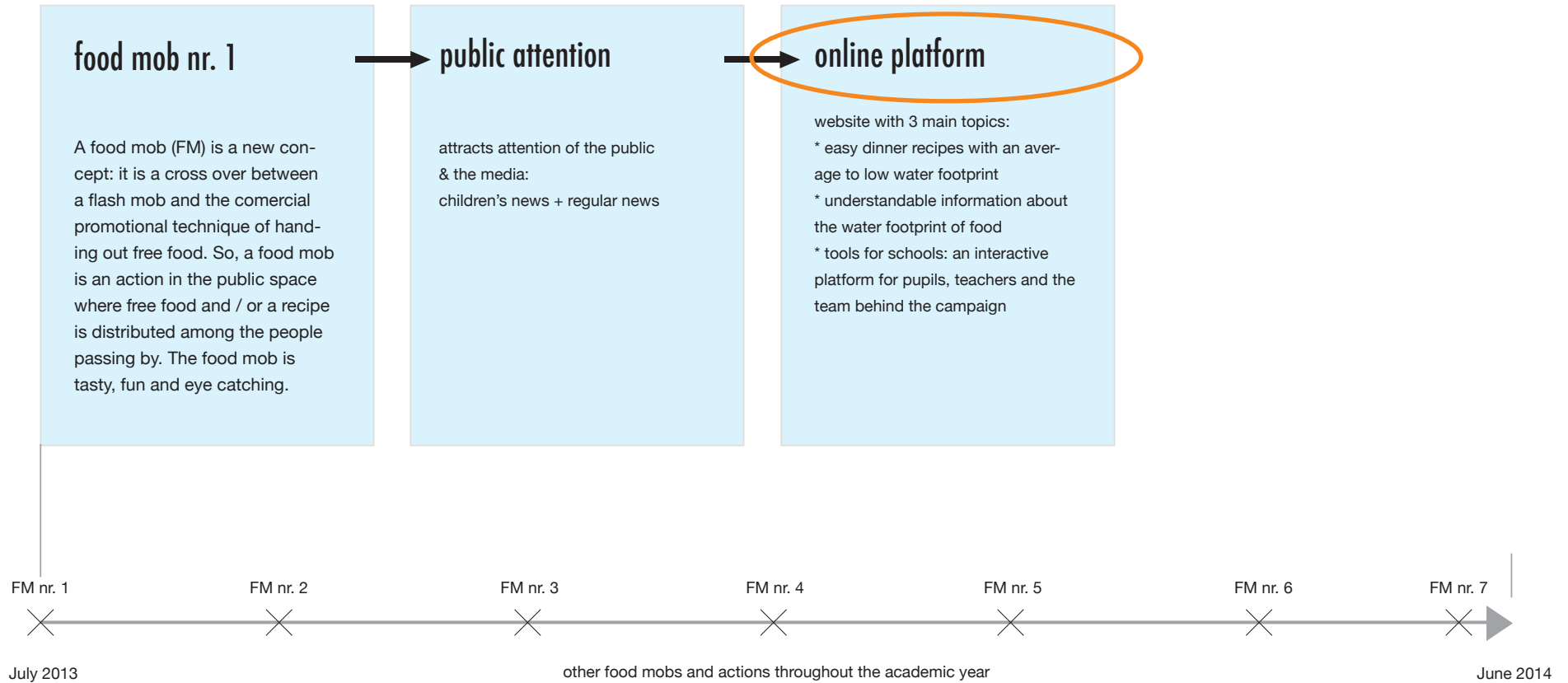


short / fixed period

overall campaign concept



overall campaign concept



website: graphic identity



logo
frontpage

daily dinner recipes



where the change happens

taste

action on your level

children's involvement (influence shopping basket)

development: graphic first steps



potato towers with chicken nibs

30'
July → March

- 3 apples
- 4 potatoes
- 1 chicken breast
- salt
- chicken spices
- corn oil

1. Peel apples and potatoes

2. Slice them

3. Grease oven tray, Build towers in it.

4. Bake chicken nibs.

5. Enjoy!

Green potatoes in carrot sauce

March - October

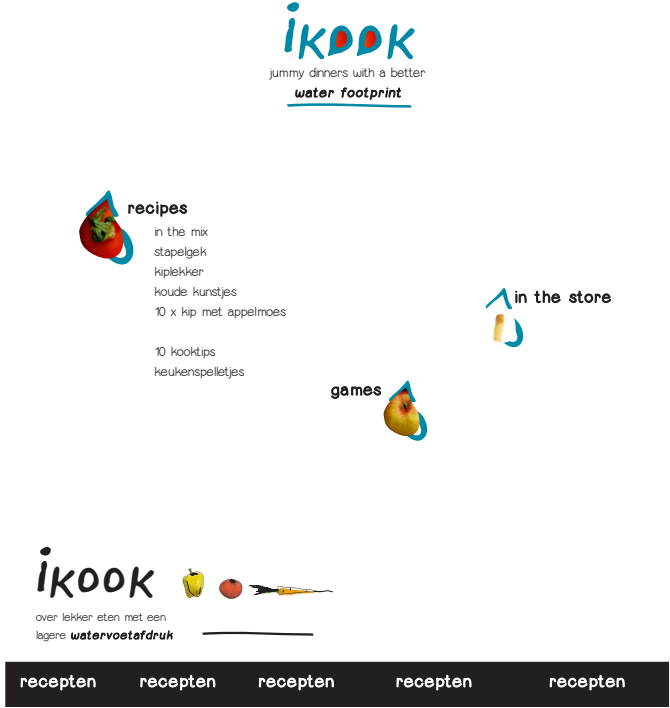
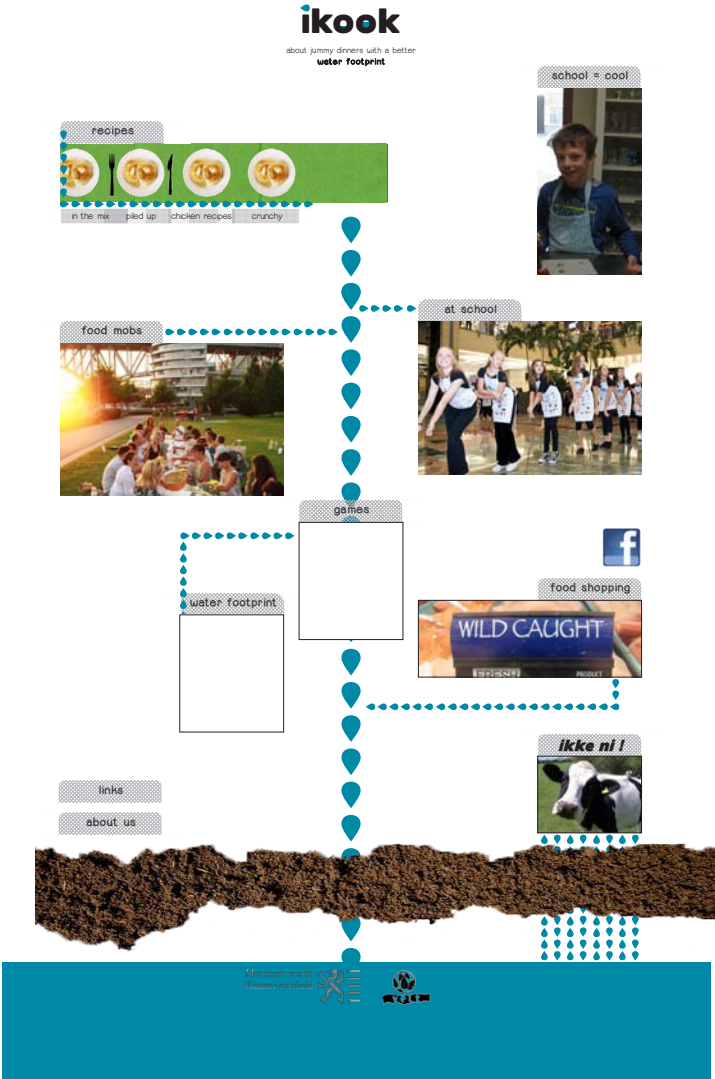
Peel potatoes, carrots, onion and garlic.
Cut in big pieces.
Stew carrots, onion and garlic in a little corn oil.
Add the water, the laurel and let cook until soft. Add turmuric, salt and peppar.
Meanwhile cook potatoes.
Mix carrots untill thick sauce.
Mix potatoes with the spinach.
Chop nuts roughly.
Serve on plates and top with the nuts.

Ingredients 8 carrots, 4 potatoes, 2 onions, 2 cloves of garlic, 2 hands of spinach, a grab brasil nuts, salt, pepper, turmuric, laurel

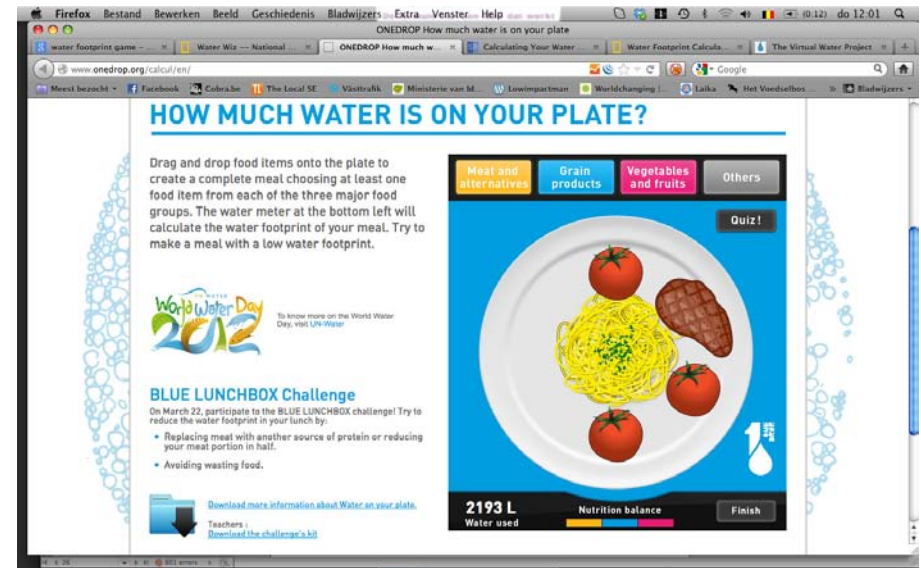
development: webstructures: pro's and cons



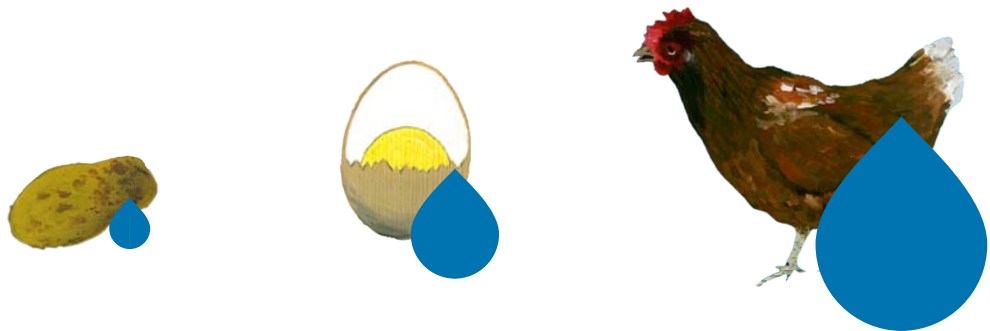
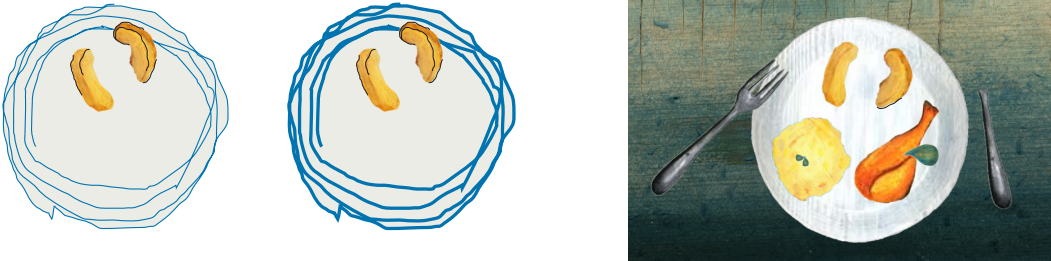
development: webstructures



development: the water footprint online for children



development: how to represent the water footprint?



development: logo



ikook

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ikook

ikook

ikook

Hooray! Buffet—with **Seven-Up!**
Nothing does it like Seven-Up!



ikook
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about yummy food with a better water footprint

ikook

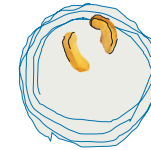
about jummy dinners with a better
water footprint

ikook

ikook



development: drawings



development: words



respect for the food

food focus

realistic food

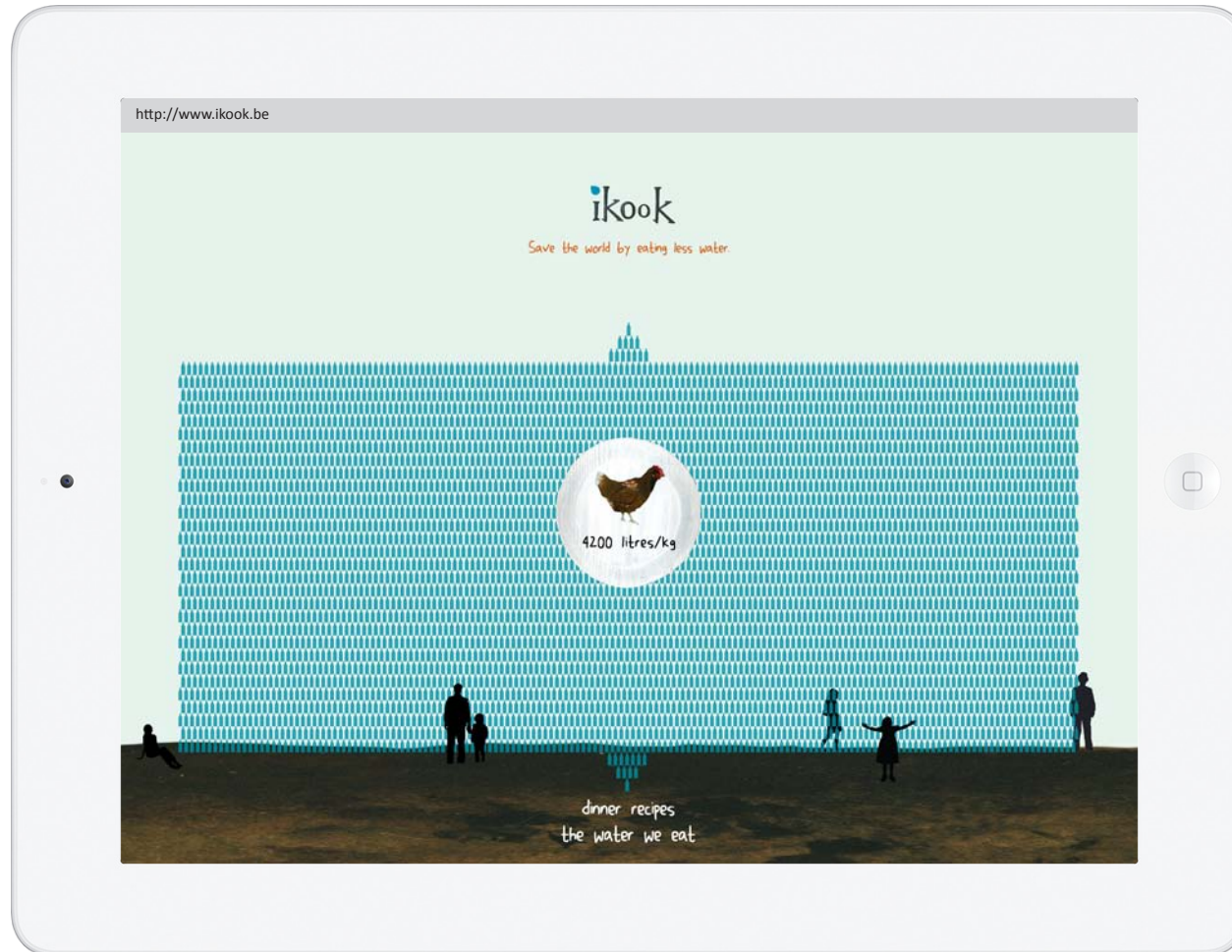
worrylessness

happy

traditional ecofeeling --- fresh

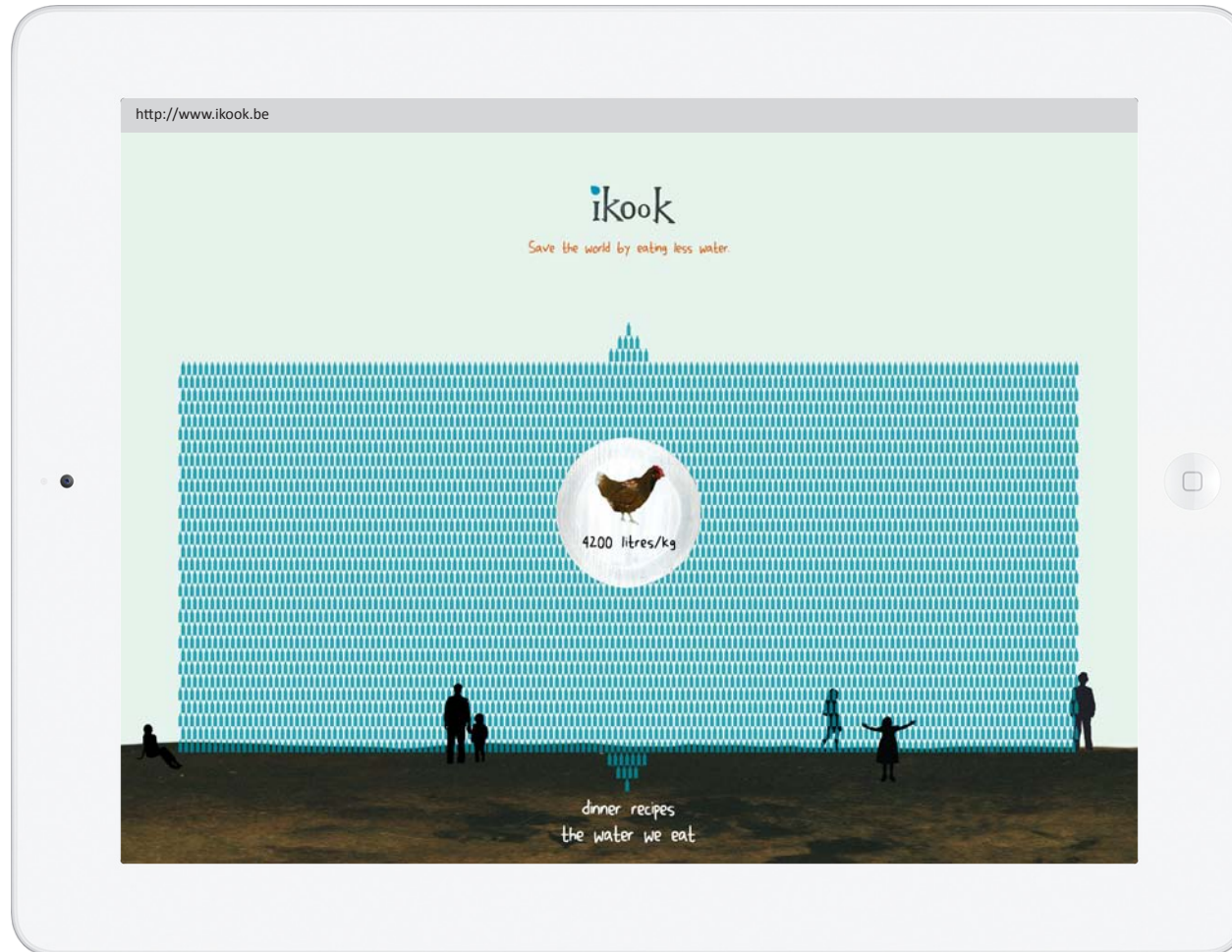
simple & easy

result: homepage



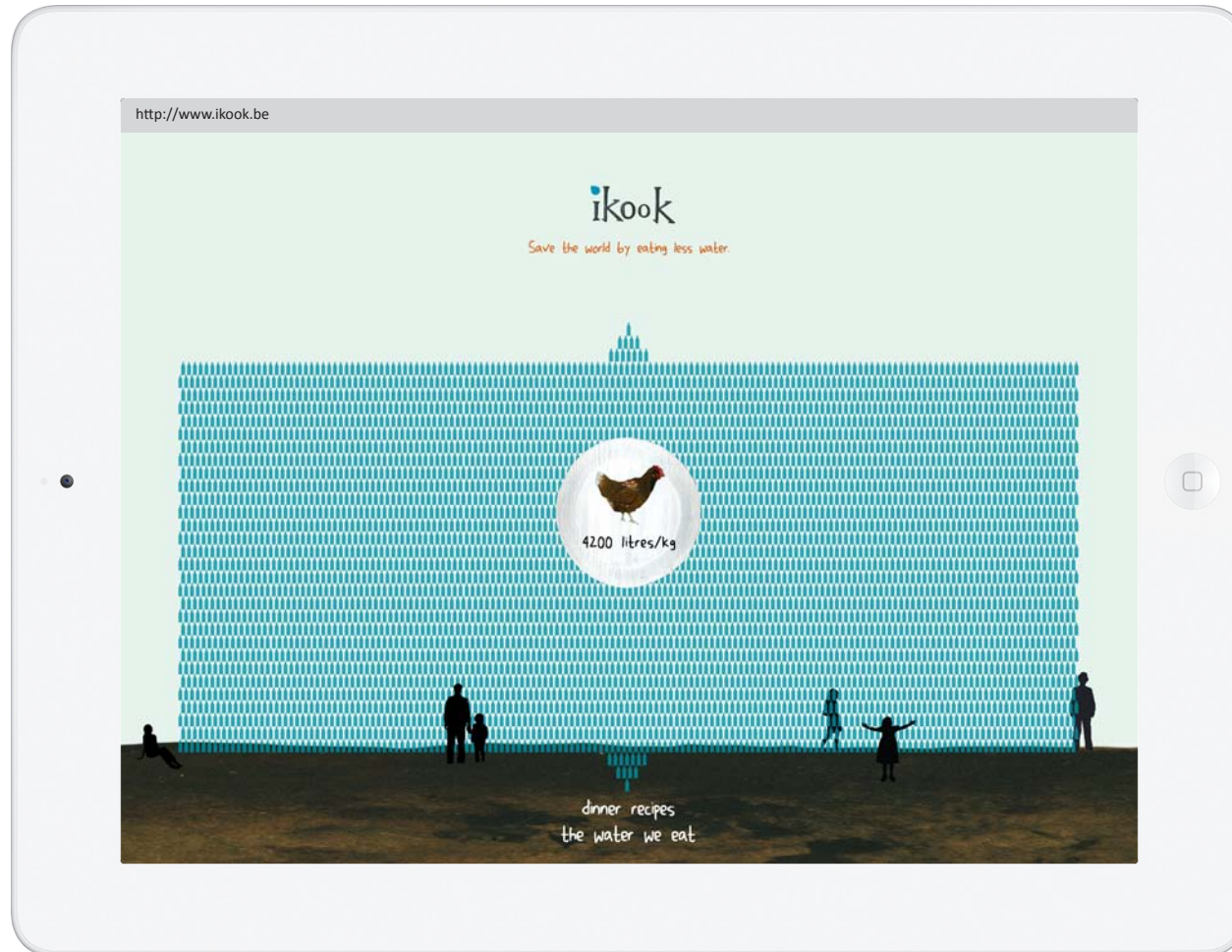
(show on iPad)

result: homepage



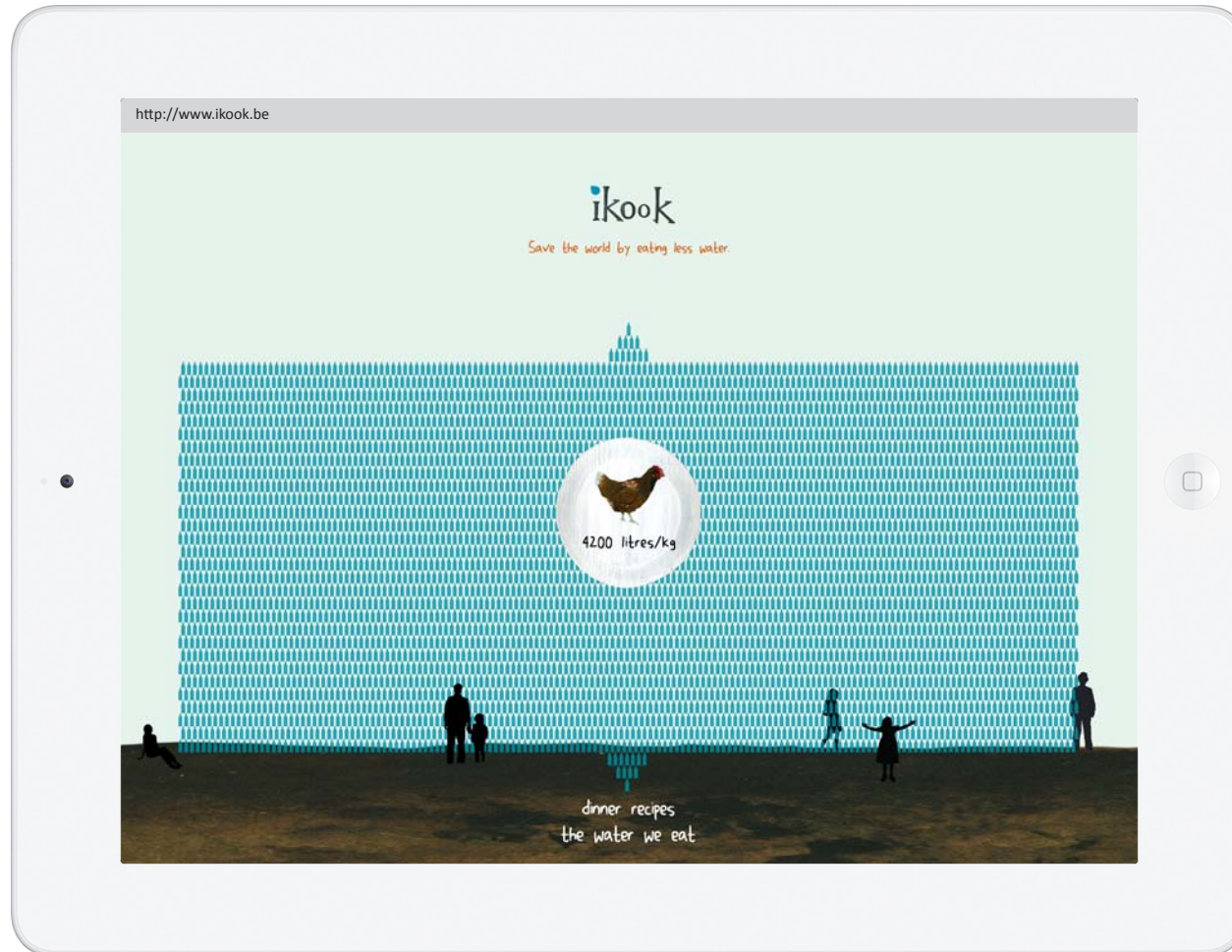
(show on iPad)

result: homepage



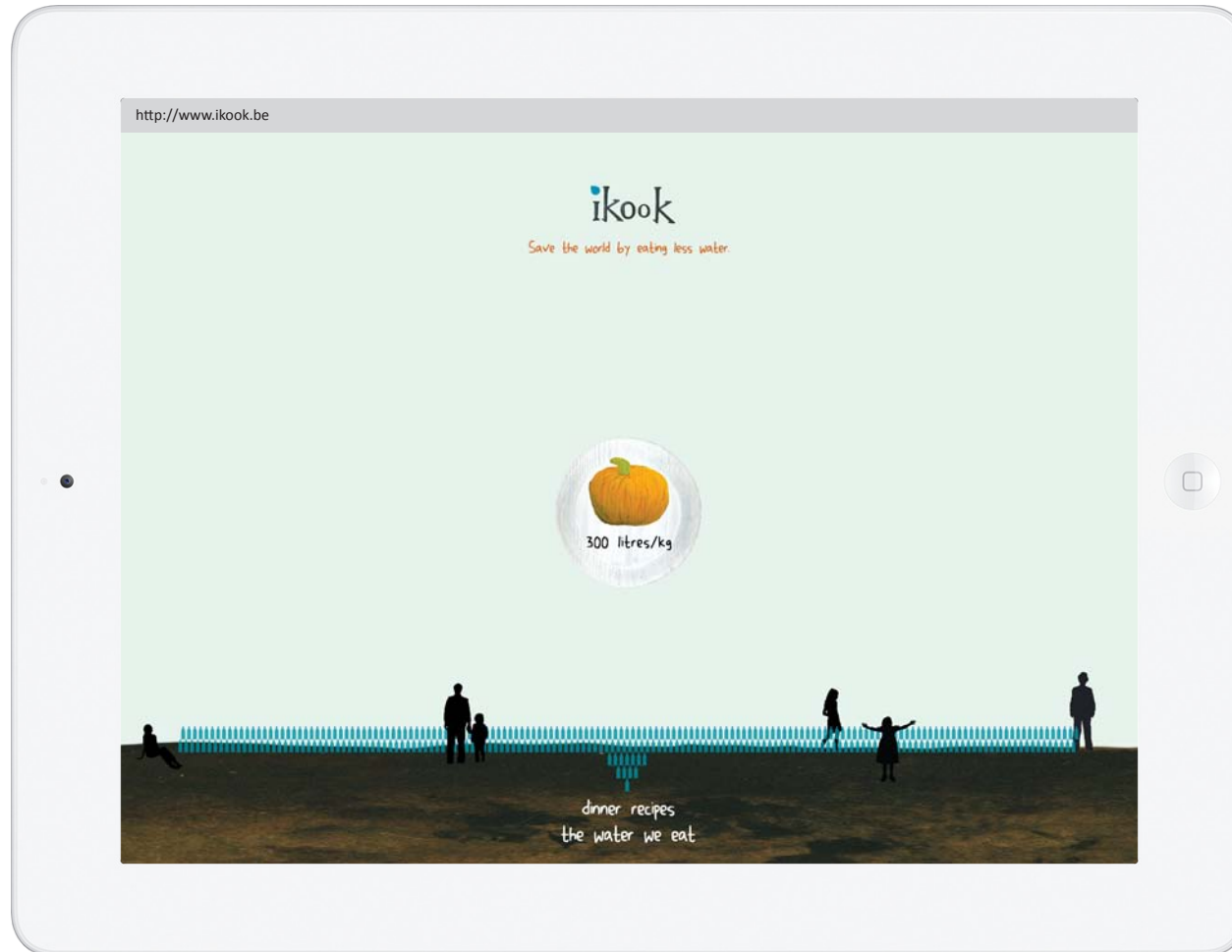
(show on iPad)

result: homepage

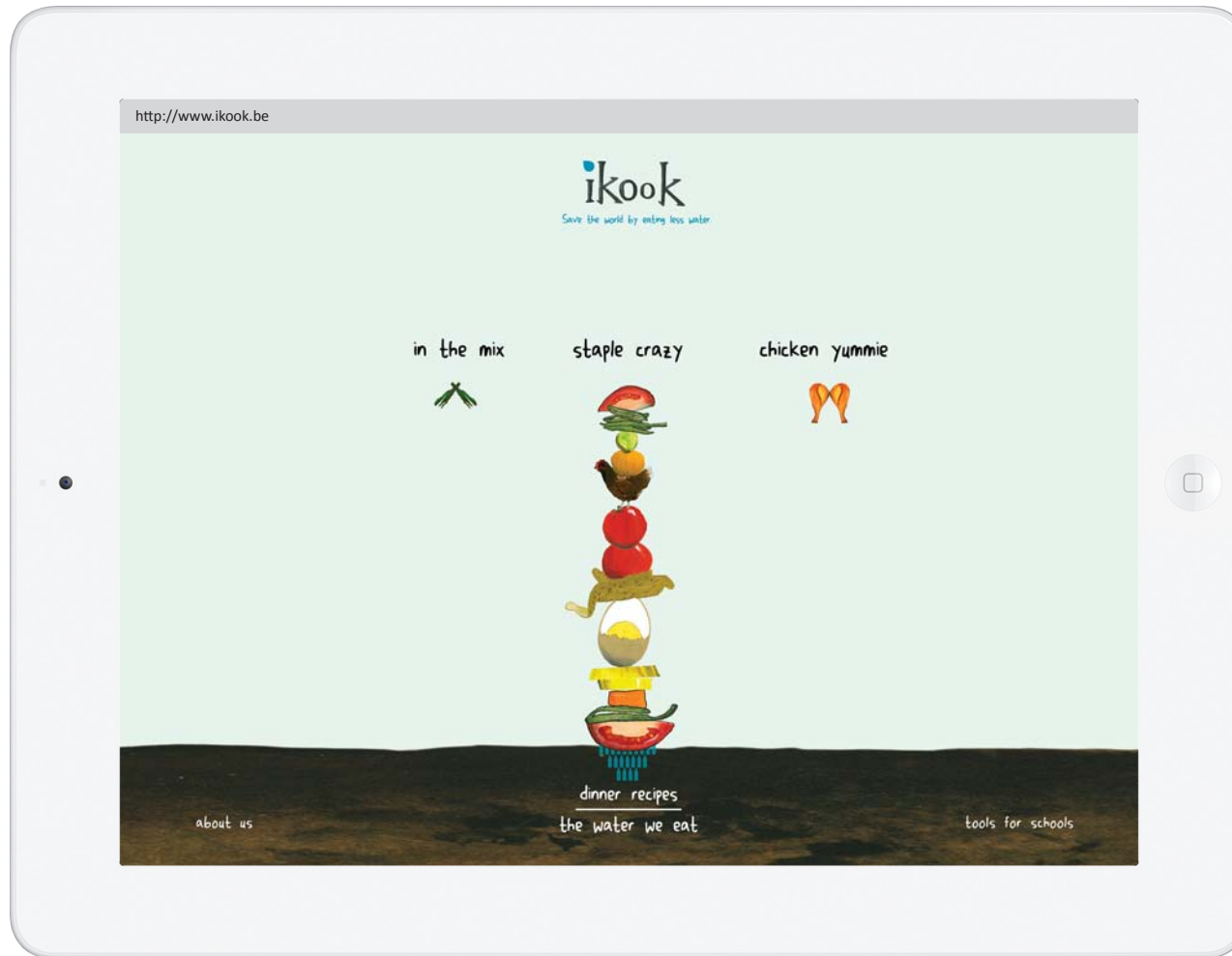


(show all next visuals and more on iPad)

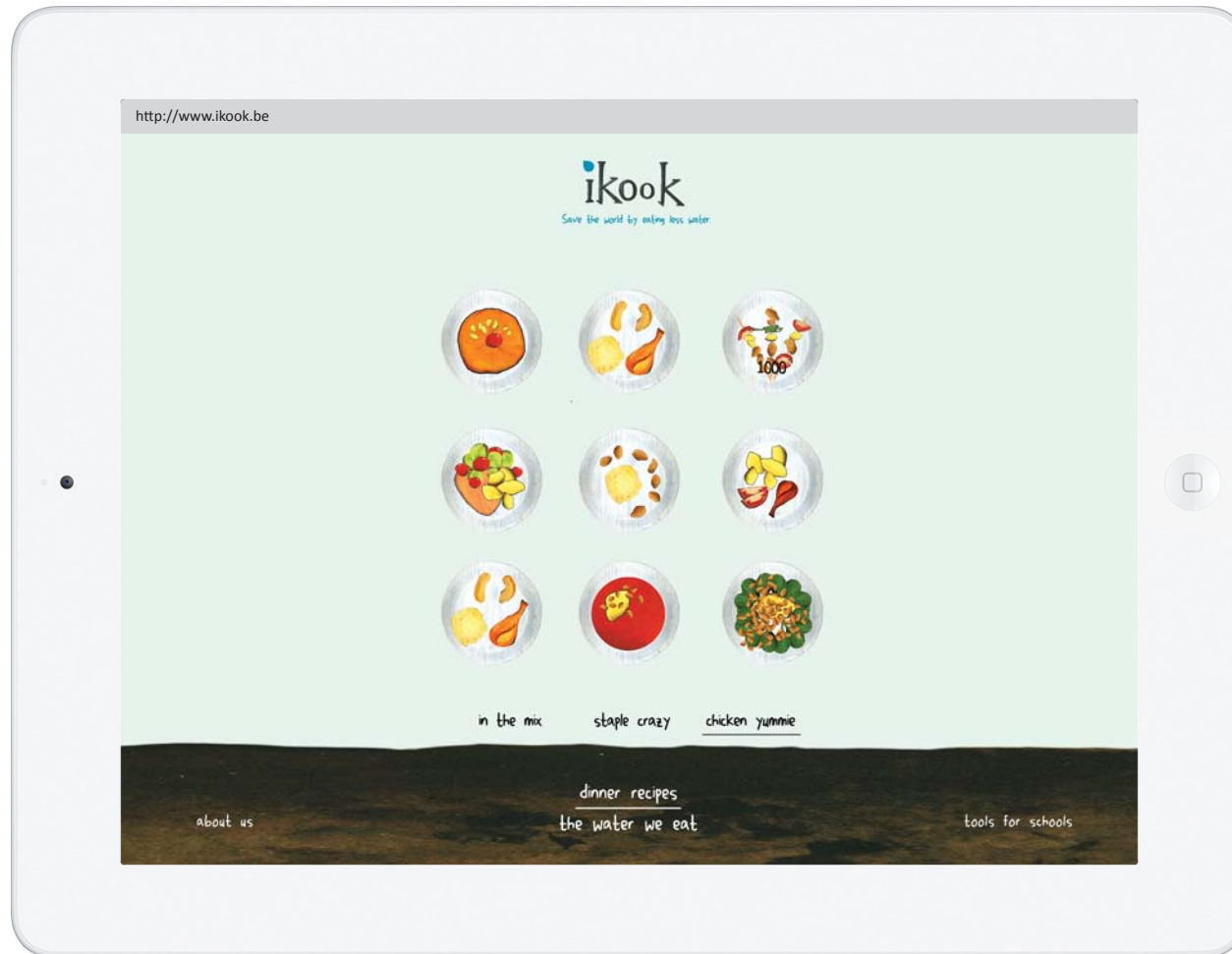
result: homepage



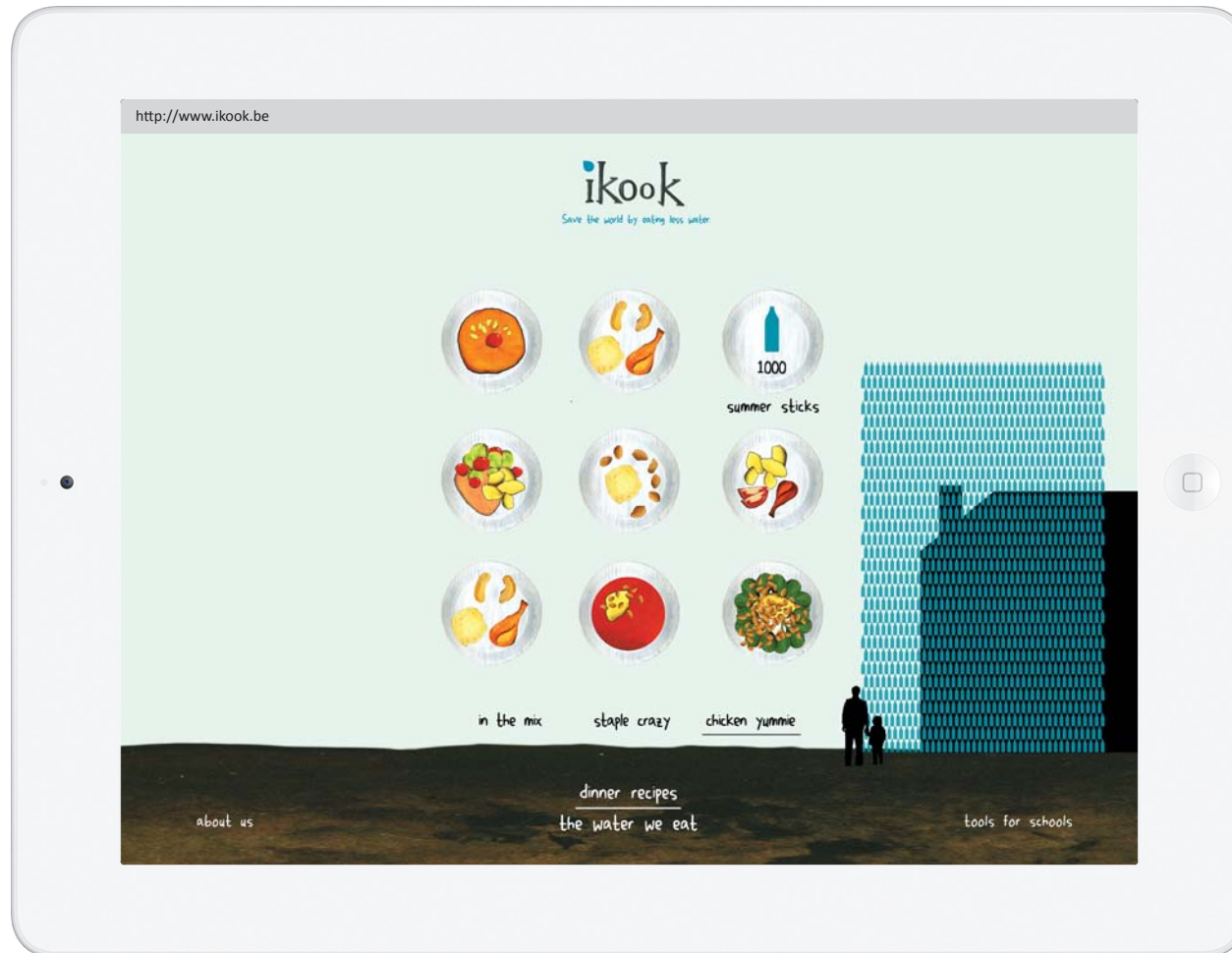
result: homepage



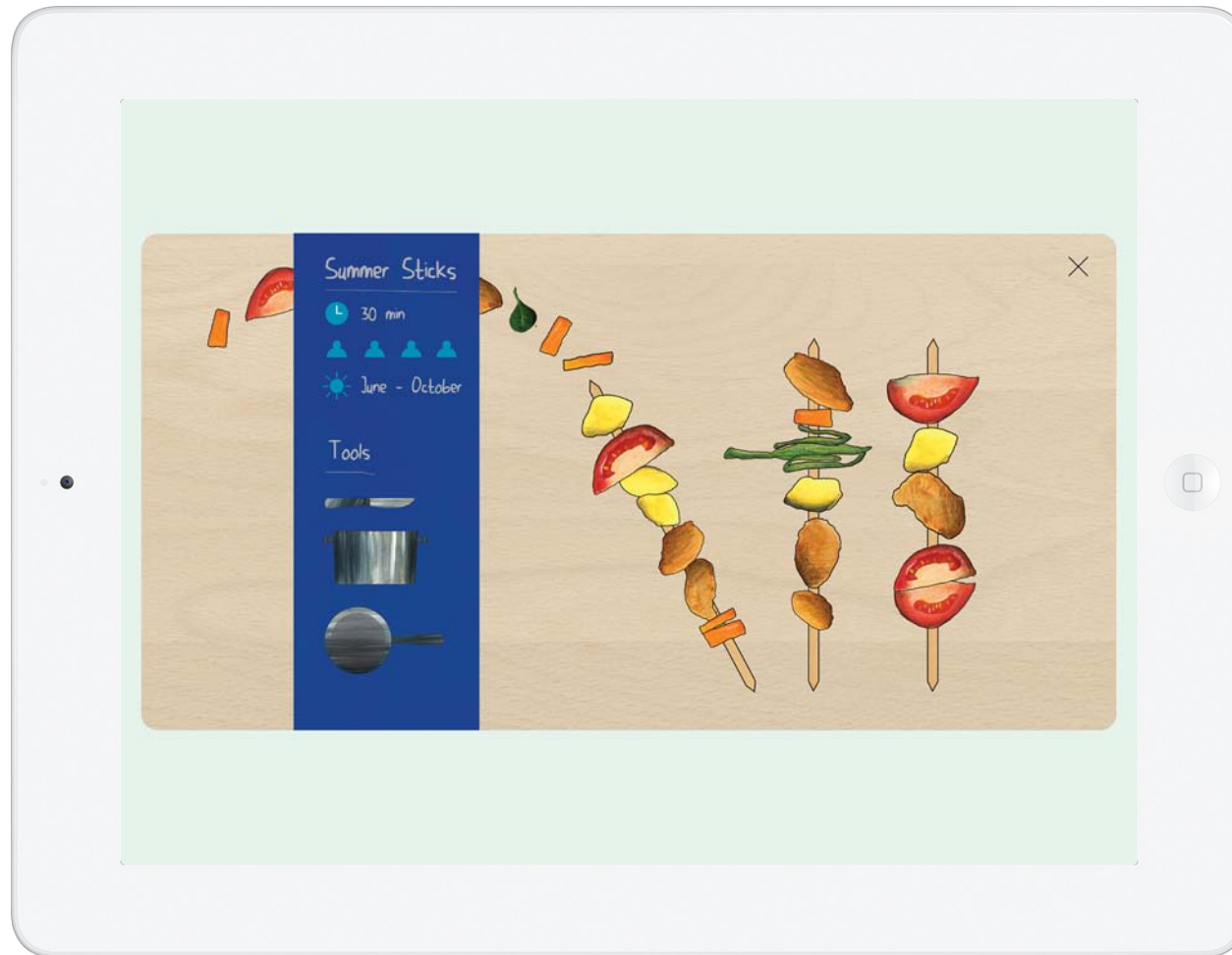
result: homepage



result: homepage



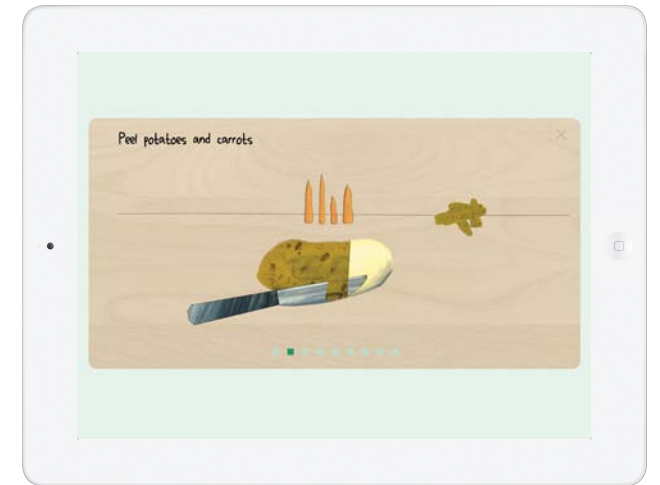
result: recipe



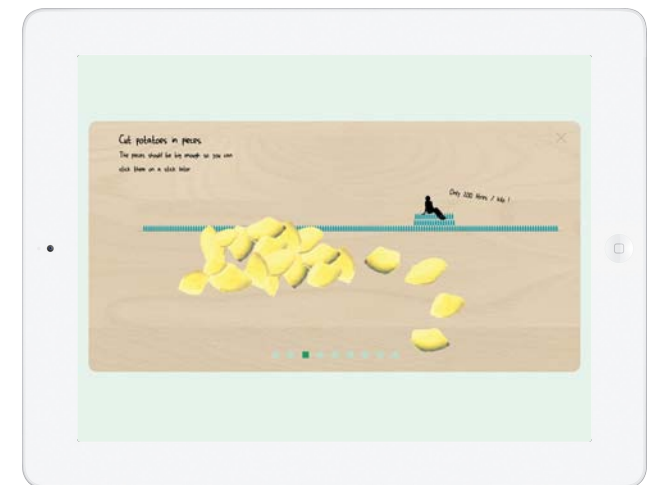
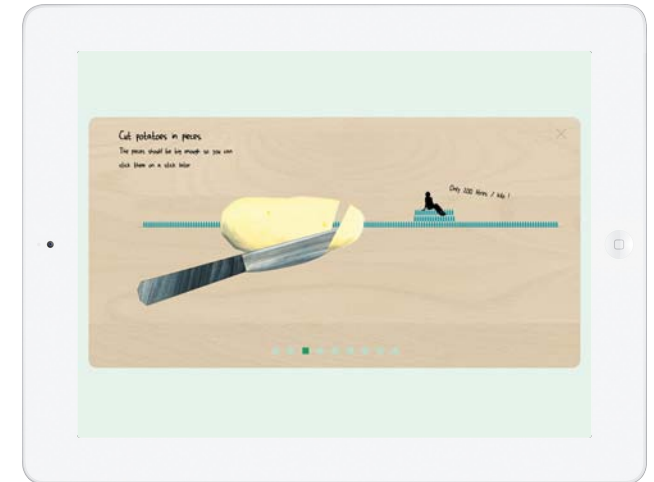
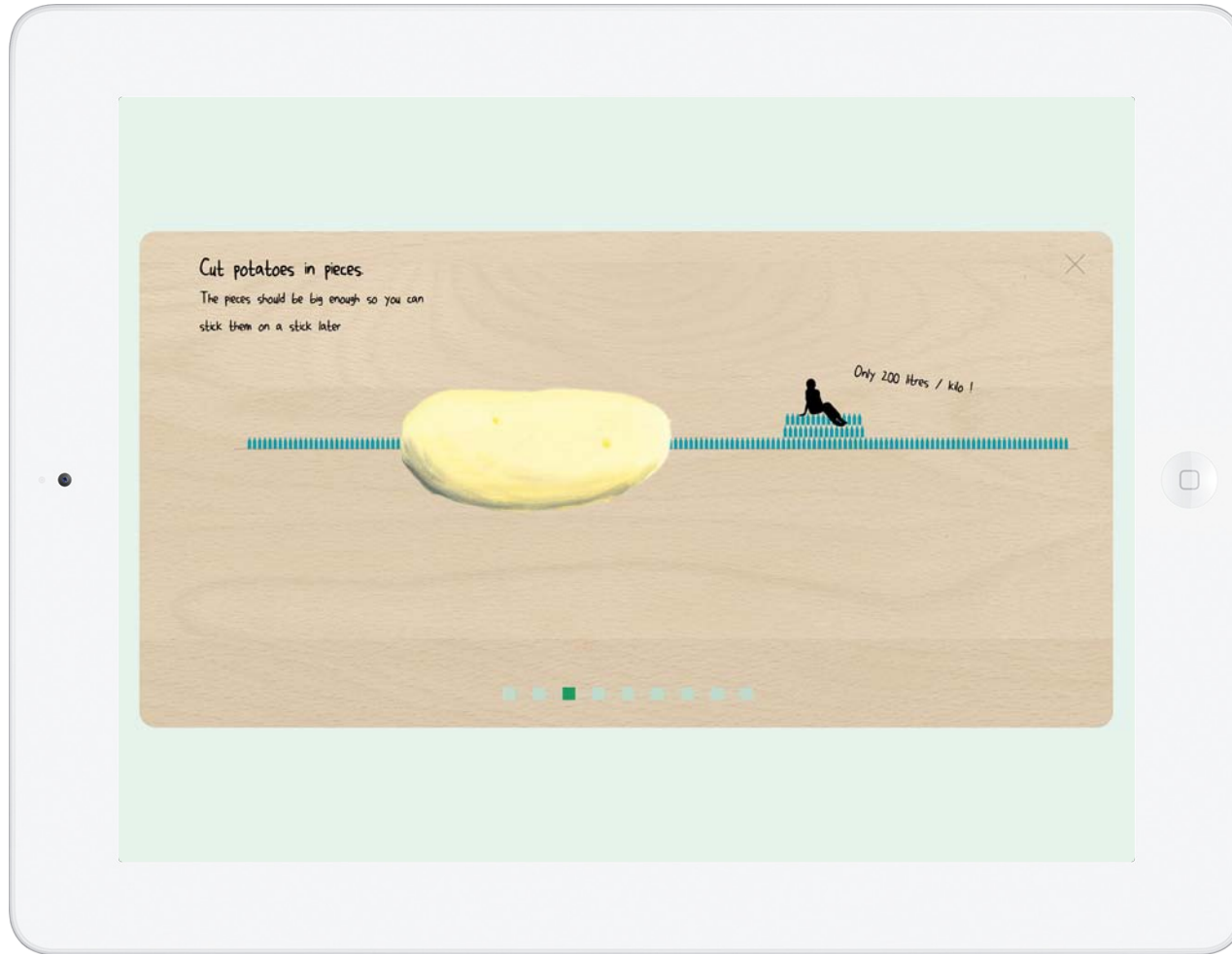
result: recipe



result: recipe



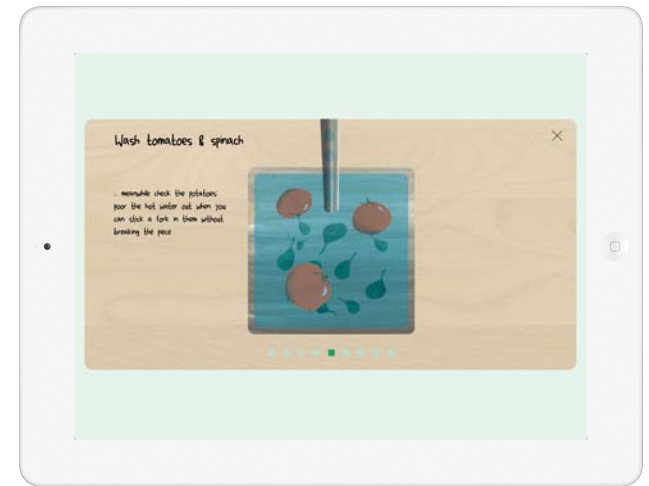
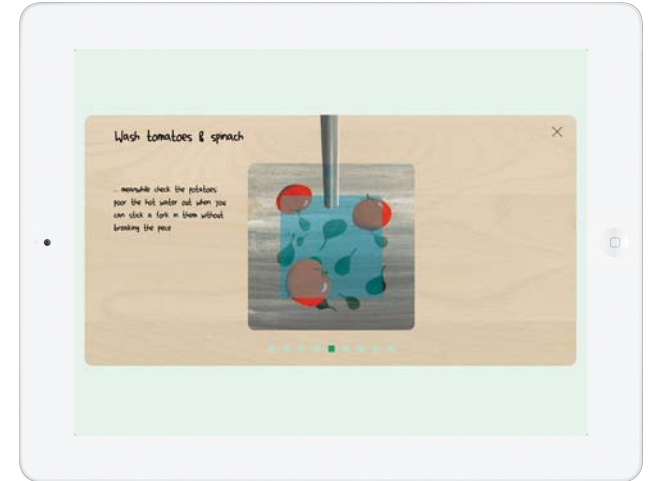
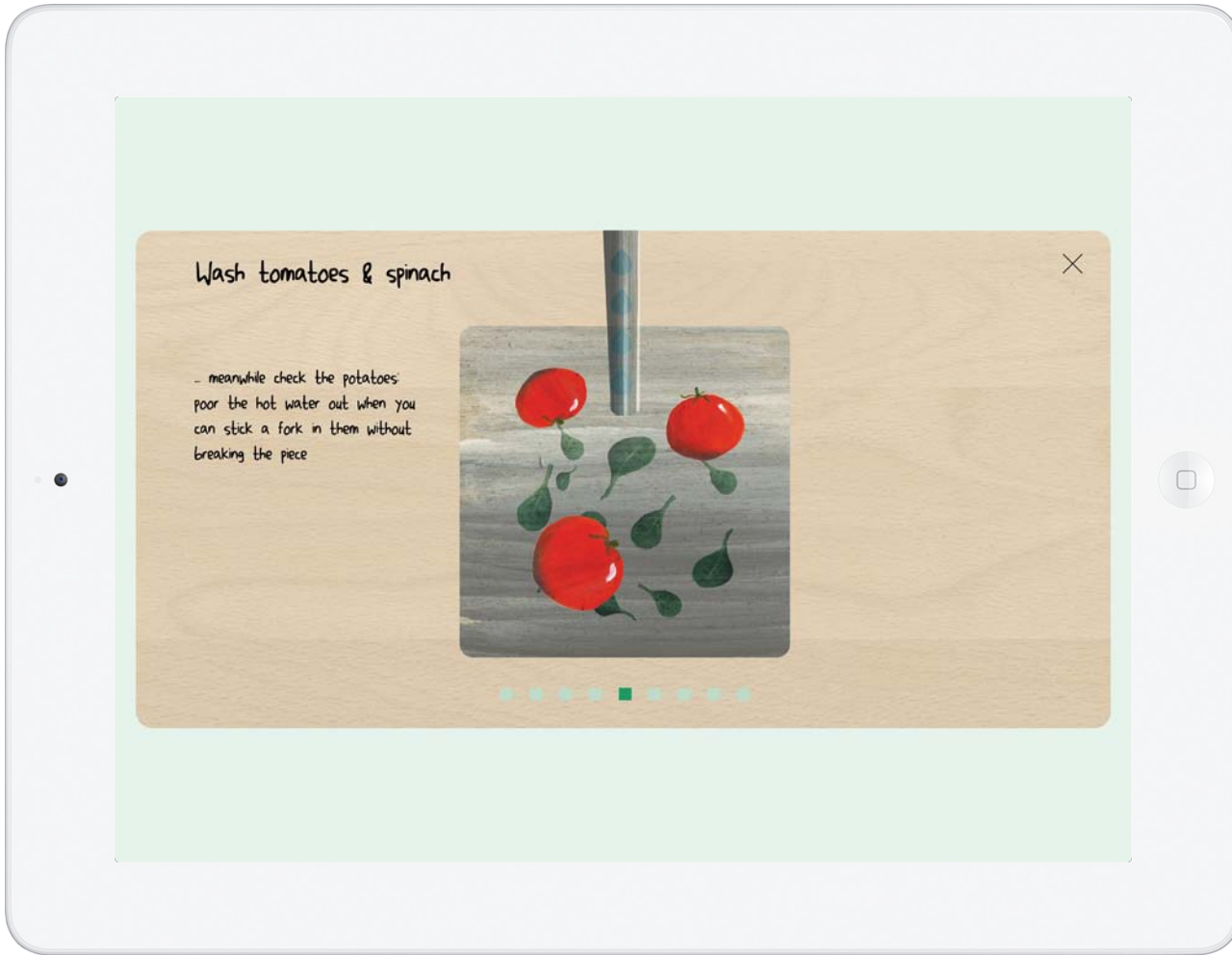
result: recipe



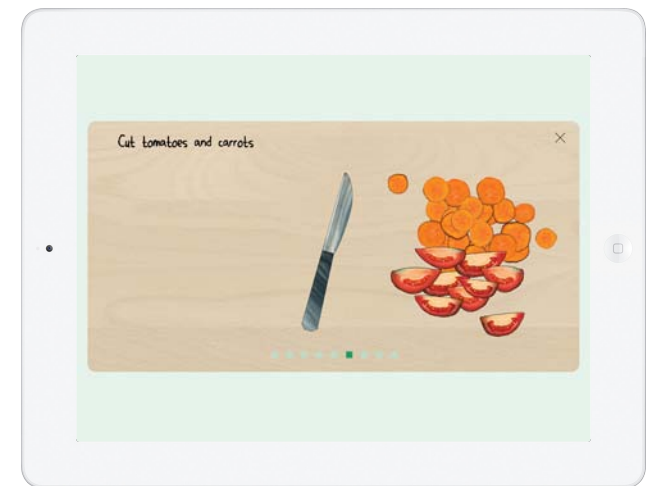
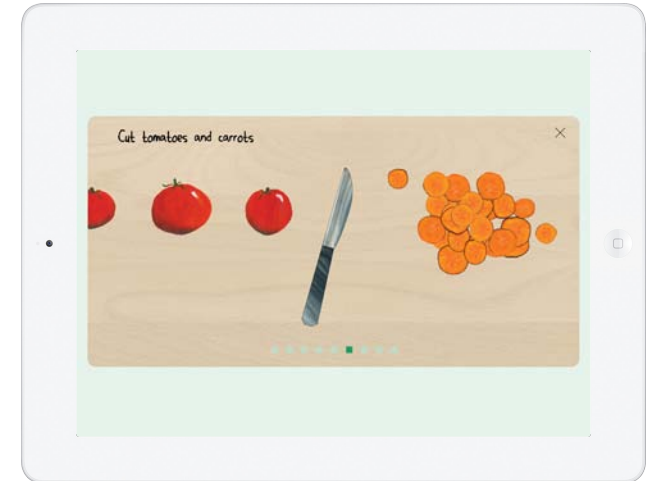
result: recipe



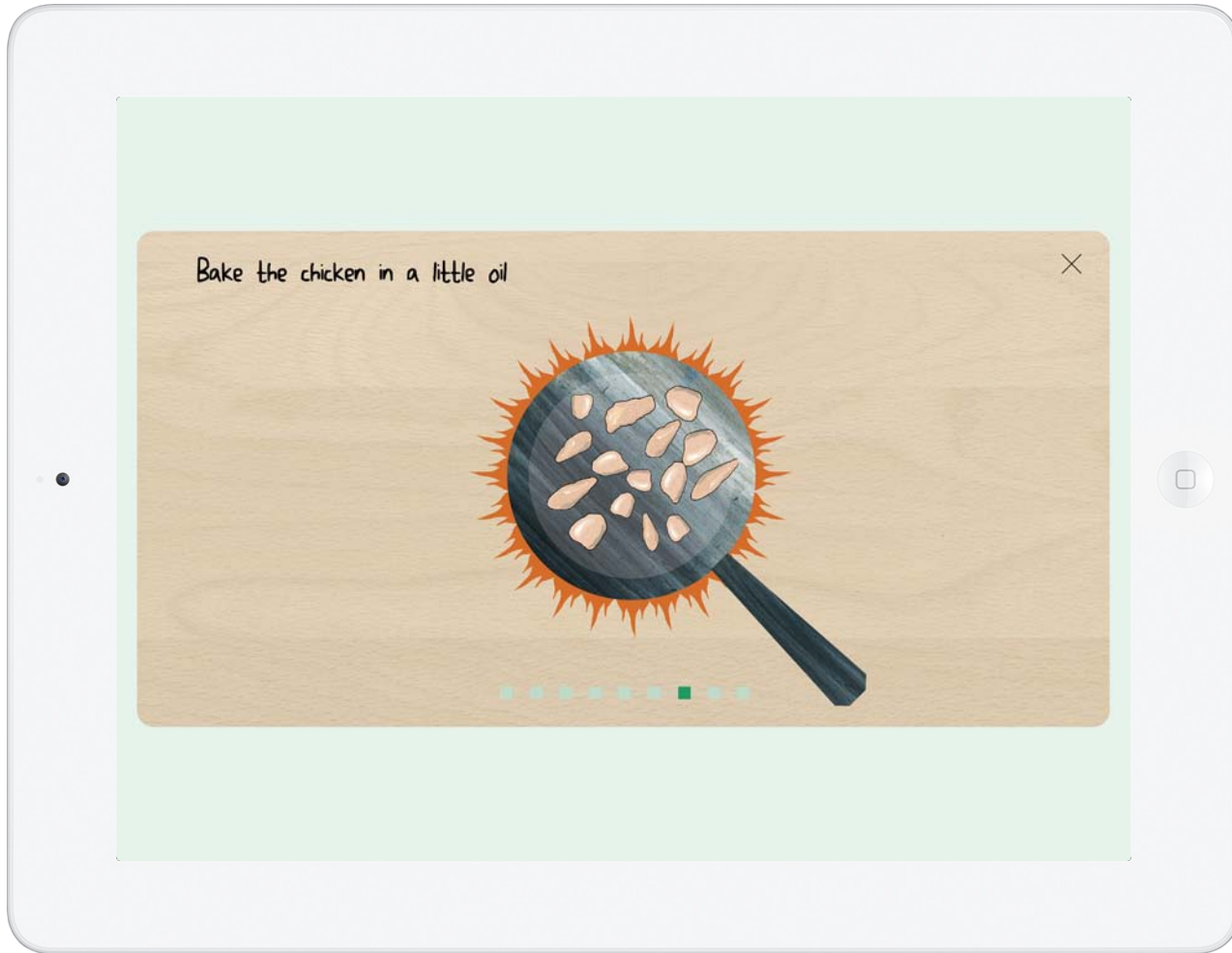
result: recipe



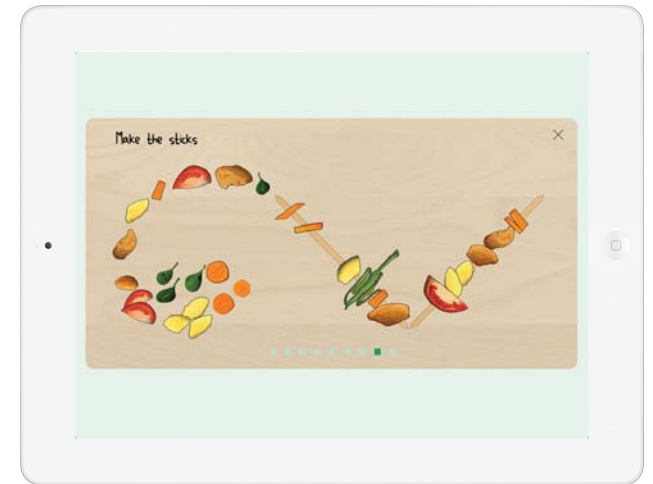
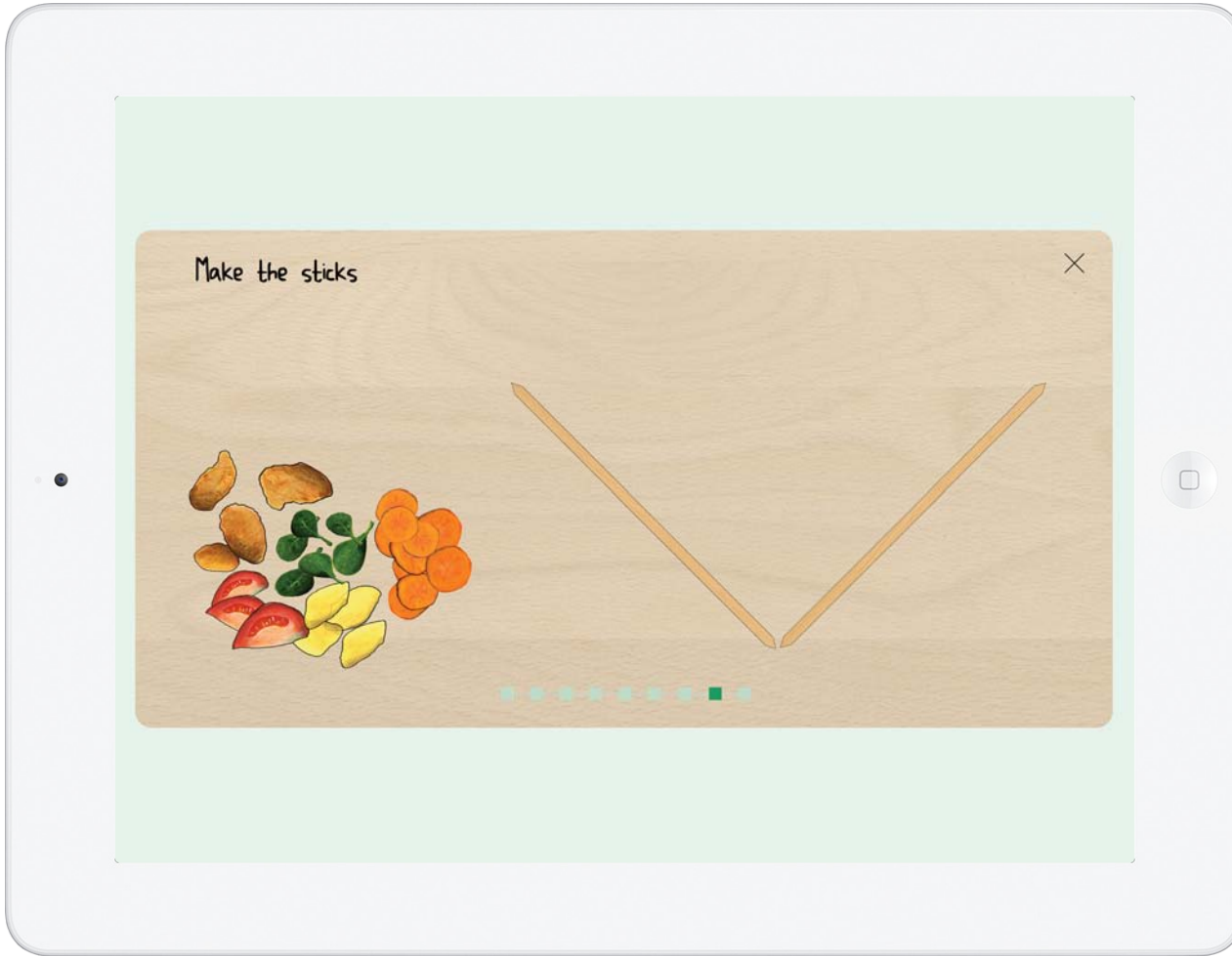
result: recipe



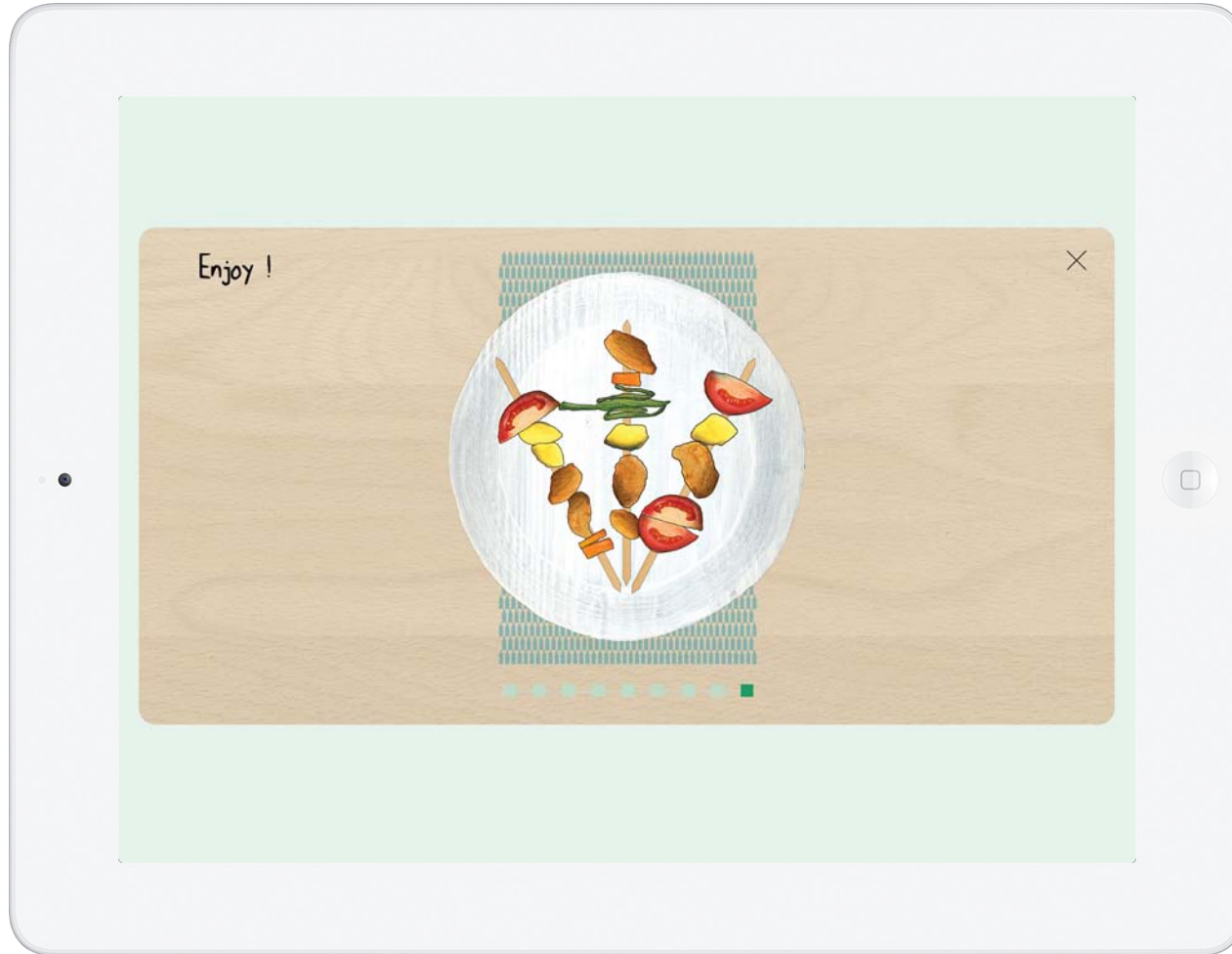
result: recipe



result: recipe



result: recipe



questions

