

PARTICIPATORY DESIGN RESEARCH OF VEGETABLE-BASED SNACK PRODUCTS WITH ADOLESCENT PARTICIPANTS

The 6th International Conference on Design Creativity (ICDC 2020)

Appendix A.1. Participatory Design Research Lesson Plan

Information and Lesson Plan

Project Title: ‘Making Vegetables “cool”’: Improving the Eating Habits of Wales’ Younger Generation’

In brief:

This project is led by PhD student Alice Gilmour. The working group research will take around 30-40 minutes during two year 8 lessons. Alice will provide a lesson plan and the resources. The teacher will lead the lessons and Alice will not talk to or interact with any of the pupils. She may make hand-written notes during the research and will photograph the board and pupils’ work at the end of the session. If you have any questions about the project, please do not hesitate to email algilmour@cardiffmet.ac.uk.

The purpose of the project:

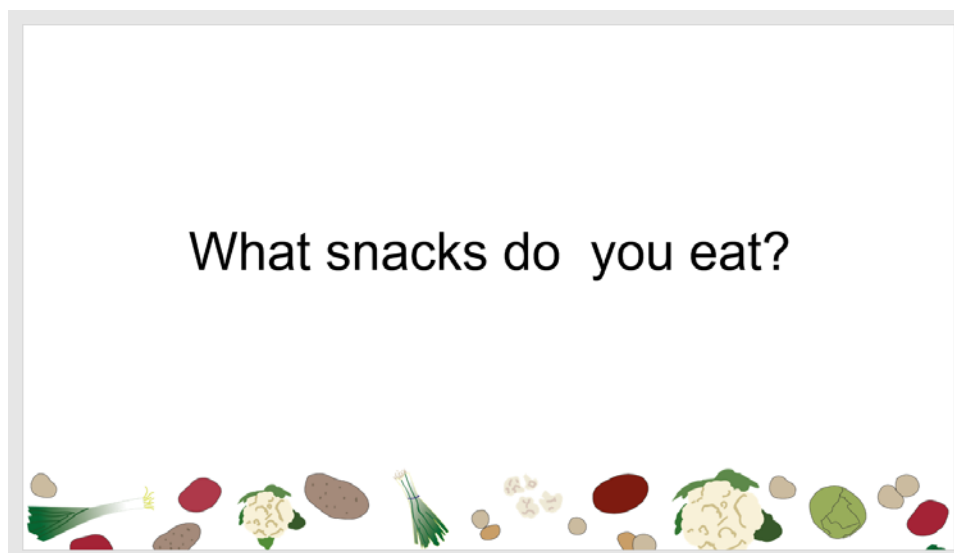
Alice is researching how to make vegetables “cool” and improving the eating habits of Wales’ younger generation. The purpose of the working groups with adolescents is to gain an insight into what pupils regard to be a good design of a vegetable-based snack.

LESSON PLAN

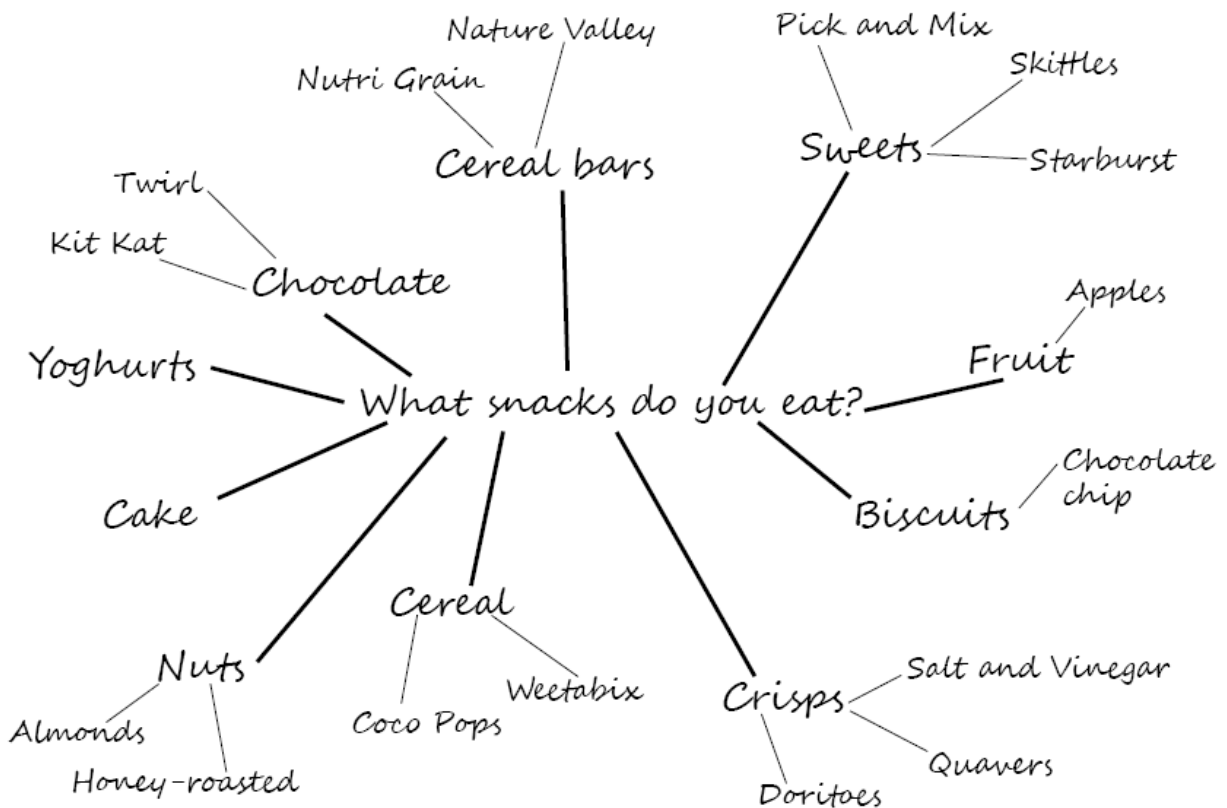
Introduction: Today we are going to be designing new snacks and evaluating ideas for new vegetable snacks.



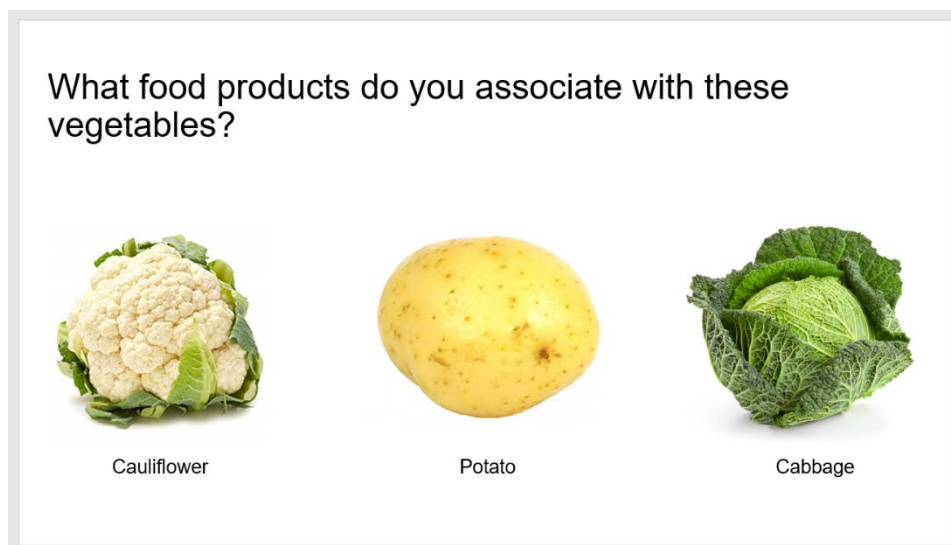
Activity One – Whole Class: Teacher creates a mind map on the board. 'What is a snack?' (Between meals etc.); 'What snacks do you eat?'; 'What about vegetables? Are any of these vegetables?'



Example of a mind map:






Activity Two – Whole class: Pupils asked what kinds of food products they associate with cauliflower, potatoes, cabbage. Teacher writes a list.



Activity Three – Pair work: Each pair is given a double-sided worksheet and the brief: 'In pairs, design four new snack products using these vegetables.' Asked to draw the product and label it. Designs can include any other ingredient, a blender and any cooking method. Given ten minutes to do the task.

Design Brief: In pairs, design four new snack products using these vegetables.

You can use any other ingredient, a blender and any cooking method!



Cauliflower Potato Cabbage

Double-sided A4 worksheet:

Brief: Design four new snack ideas using any of these vegetables: cauliflower, potatoes and cabbage.	
<div>Idea 1</div>	<div>Idea 2</div>
<div>Idea 3</div>	
<div>Idea 4</div>	
Label your drawings! Colour? Flavour combinations? Vegetables included? Price? Packaging?	

Activity Four – Whole class: Pupils given the opportunity to voluntarily share their snack ideas with the class. Class discussion.

Which of these snacks would you eat?

Do you have any suggestions?

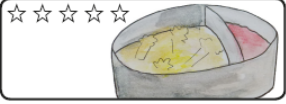







Activity Five – Individually: ‘Let’s look at these ideas that a designer has come up with.’
Teacher explains each idea briefly.

Pupils given a sheet with the same product ideas on them and asked to rate and comment on the designs.

A4 worksheet:

What is your opinion of these designs?

<p>Idea 1</p>  <p>Spicy cauliflower pieces with sweet chilli dipping sauce.</p> <p>I like / don't like this because</p> <p>.....</p> <p>I would improve this by</p> <p>.....</p>	<p>Idea 2</p>  <p>Chocolate chip cookies with squashed crisps for added crunch.</p> <p>I like / don't like this because</p> <p>.....</p> <p>I would improve this by</p> <p>.....</p>
<p>Idea 3</p>  <p>Mini potato hash browns with chocolate dipping sauce.</p> <p>I like / don't like this because</p> <p>.....</p> <p>I would improve this by</p> <p>.....</p>	<p>Idea 4</p>  <p>Chocolate chip muffins made with hidden mashed potato.</p> <p>I like / don't like this because</p> <p>.....</p> <p>I would improve this by</p> <p>.....</p>
<p>Idea 5</p>  <p>Cereal bar with blended cauliflower, potatoes, seeds and spices.</p> <p>I like / don't like this because</p> <p>.....</p> <p>I would improve this by</p> <p>.....</p>	<p>Idea 6</p>  <p>Mashed potato chocolate truffles coated in cocoa powder.</p> <p>I like / don't like this because</p> <p>.....</p> <p>I would improve this by</p> <p>.....</p>

Activity Six / Plenary – Whole Class: Pupils will be asked if they want to share their ideas with the group. Group discussion.

Which of these snacks would you eat?

Do you have any suggestions?



Appendix A.2.: Participatory Design Research Pair Worksheet

Brief: Design four new snack ideas using any of these vegetables: cauliflower, potatoes and cabbage.

Idea 1

Idea 2

Idea 3

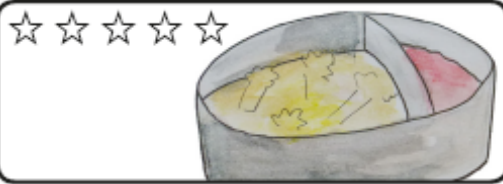
Idea 4

Label your drawings! Colour? Flavour combinations? Vegetables included? Price? Packaging?

Appendix A.3.: Participatory Design Research Individual Worksheet

What is your opinion of these designs?

Idea 1



Spicy cauliflower pieces with sweet chilli dipping sauce.

I like / don't like this because

.....

I would improve this by

.....

.....

Idea 2



Chocolate chip cookies with squashed crisps for added crunch.

I like / don't like this because

.....

I would improve this by

.....

.....

Idea 3



Mini potato hash browns with chocolate dipping sauce.

I like / don't like this because

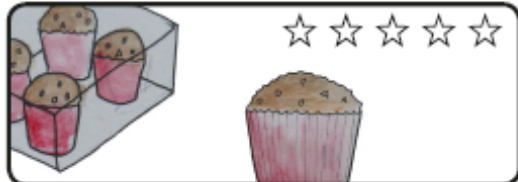
.....

I would improve this by

.....

.....

Idea 4



Chocolate chip muffins made with hidden mashed potato.

I like / don't like this because

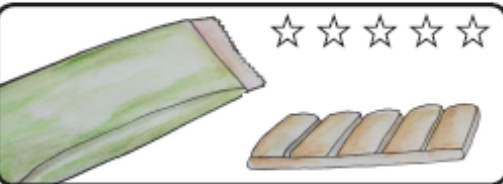
.....

I would improve this by

.....

.....

Idea 5



Cereal bar with blended cauliflower, potatoes, seeds and spices.

I like / don't like this because

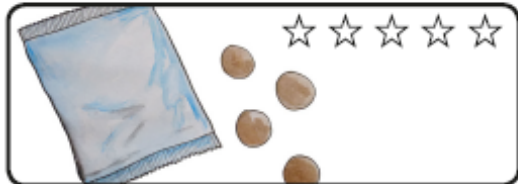
.....

I would improve this by

.....

.....

Idea 6



Mashed potato chocolate truffles coated in cocoa powder.

I like / don't like this because

.....

I would improve this by

.....

.....

Appendix A.4.: Snacks Eaten

Type of Product		Number
Fruit	'Fruit'	4
	Apple	6
	Orange	7
	Peach	2
	Banana	7
	Nectarine	1
	Plums	1
	Grapes	6
	Pineapple	1
	Melon	2
	Watermelon	5
	Strawberries	6
	Blackberries	1
	Raspberries	1
	Blueberries	4
	Grapefruit	1
	Fruit salad	1
	Fruit bags	1
	Raisins / sultanas	2
Vegetables	Carrots / baby carrots / sticks	9
	Peppers	3
	Cucumber / baby cucumbers	5
	Corn	1
	Tomatoes / Cherry tomatoes	2
	Gherkins	1
	Potatoes	1
	Lettuce	1
Nuts and Seeds	'Nuts'	5
	Almonds	1
	Roasted salted peanuts	1
	Monkey nuts	1
	Sesame seeds	1
Confectionery	Chocolate	13
	<i>White chocolate</i>	1
	<i>Milk chocolate</i>	1
	<i>Cadbury's</i>	1
	<i>Caramels</i>	1
	Toffees	1
	Candy / sweets	7
	Marshmallow	1

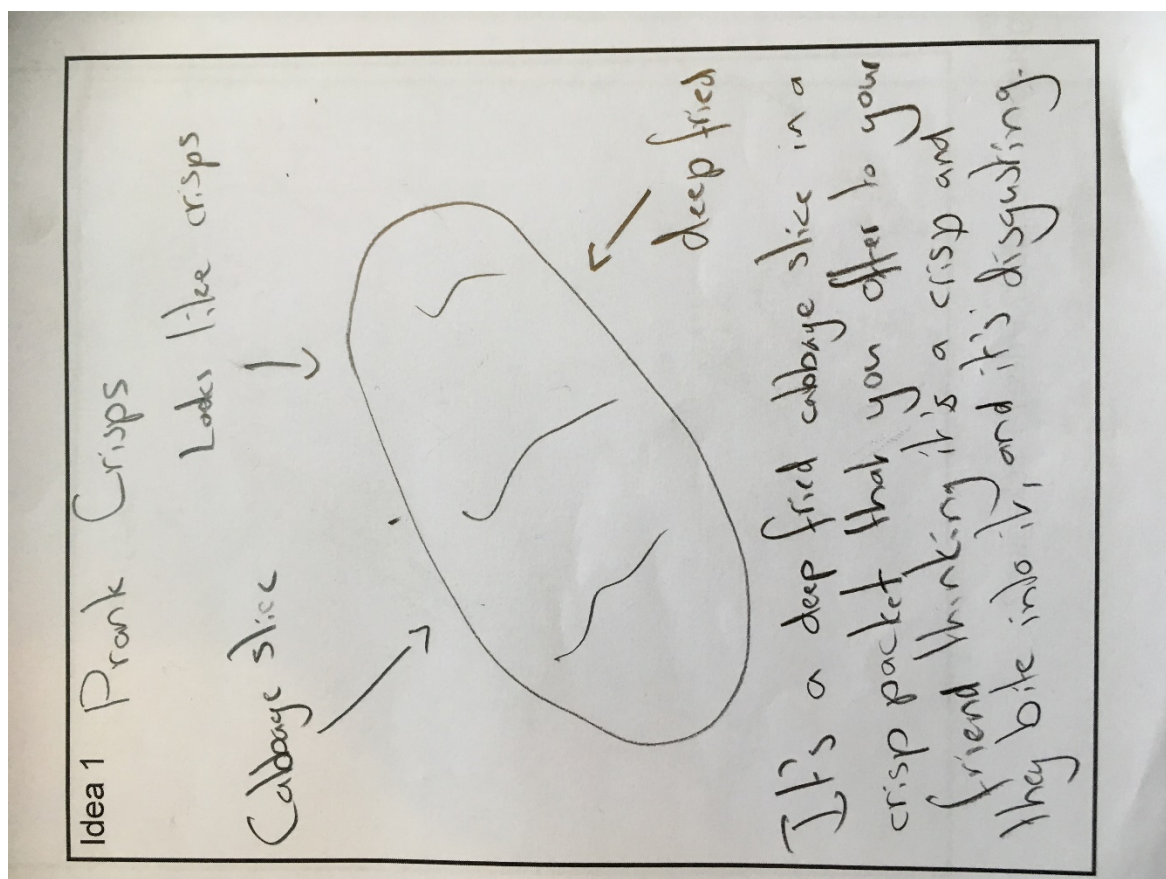
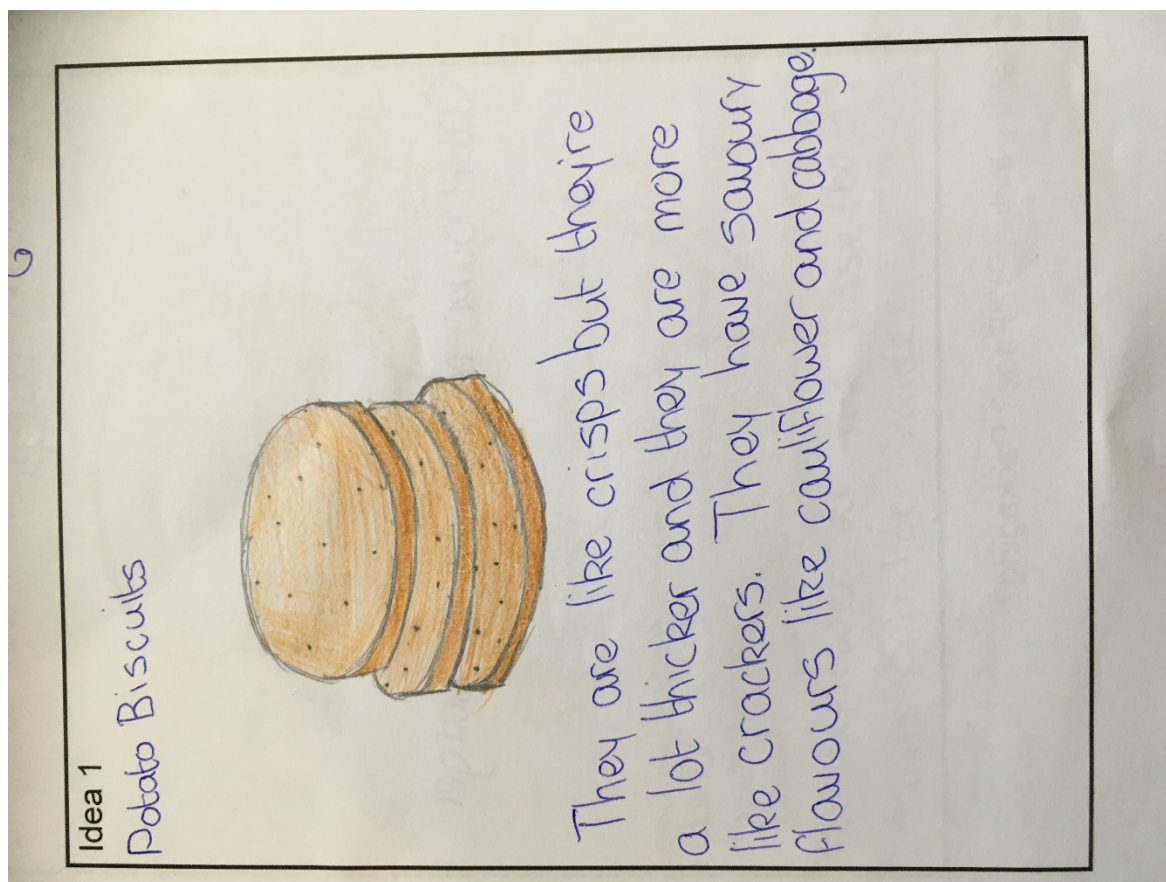
	Cereal bars	1
	Breakfast bars	1
	Snack bars	1
Sweet Baked Goods	Cake	5
	<i>Mr Kipling cake bar</i>	1
	<i>French fancies</i>	1
	<i>Layered cake</i>	1
	<i>Mini rolls</i>	2
	<i>Chocolate cake</i>	1
	Brownies	2
	Millionaire shortbread	1
	Muffin	1
	Doughnuts	1
	Swiss roll	1
	Cookies	5
	Biscuits	8
	<i>Caramel digestives</i>	1
	<i>Oreos</i>	2
	<i>Bourbon</i>	1
	Cinnamon sticks	1
	Brioche buns	1
	Hot cross buns	1
	Malt loaf	1
	Waffles	1
	Pancake	1
Sweet Snacks	Ice cream	1
	Ice lolly	1
	<i>Nutella</i>	1
	Yogurt / Greek yogurt	4
	Cereal	1
	Granola	1
Savoury Baked Goods	Panini	1
	Pizza	1
	Bread / Toast	3
	Sandwich	1
	Hummus and flatbread	1
	Sausage roll	1
	Tikkia (Indian)	1
	Poppadom	1
Savoury Snacks	Crisps	10
	<i>Doritos</i>	2
	<i>Snack-A-Jacks</i>	1

	Crackers	8
	Breadsticks	2
	Noodles	1
	Soup	1
	Tuna	2
	Cheese	9
	<i>Cheese string</i>	1
	<i>Babybel</i>	2
	<i>Cheese dippers</i>	1
	Cheese and pineapple	1
	Pepperoni	1
	Hummus	2
	Chicken	3
	Chicken satas	1
	Leg of ham	1
	Pork crackling	1
	'Gogo Chalia'	1
'Fast Food'	Deep fried Mars bar	1
	Chips	3
	Potato wedges	1
	Chicken nuggets	2
	Turkey twizzlers	1
	Burger	1
	Pizza	1
Drinks	<i>Cola / Coca Cola</i>	2
	Juice	1
	Grape Juice	1
	Grape juice	1
	Smoothie	2
	Milkshake	2
	<i>Yazoo</i>	1
	Tea	1

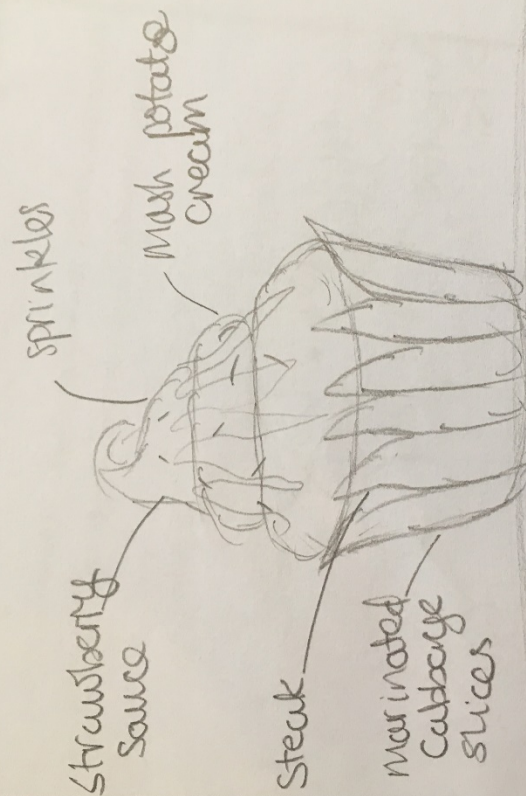
Appendix A.5.: Foods Associated with Cauliflower, Potato and Cabbage

Cauliflower	Potato	Cabbage
With a dip	Chips	Cabbage soup
Cauliflower cheese	Potato doughnuts ('not available here')	Kimchi (girl wrote on board)
Tursh (red/salty/sour)	Crisps	In bread and pasta
Popcorn cauliflower	Potato and leek soup	Sauerkraut (spelt for teacher)
Cauliflower pizza	Potato salad	Broth
Cauliflower steak	Tikia (savoury Pakistani dish)	Roast dinner
Stir fry	Potato noodle soup	Stew
Roast dinner	Potato wedges	
	Potato curry	
	Stew	
	Mashed potato	
	Hash browns	
	Potato waffles	
	Roast potatoes	
	Jacket potatoes	
	Boiled potatoes	
	French fries	
	Spanish omelette	

Appendix A.6.: Some Responses to the Design Brief



Idea 3

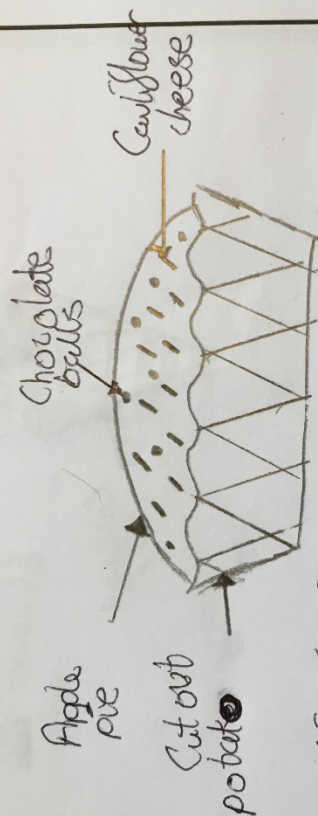


- Mash potato as the Cream on the cupcake
- Steak as the base
- Marinated cabbage as the Cupcake case.

Label your drawings! Colour? Flavour combinations? Ve

Idea 2

Cauli & Apple Pie

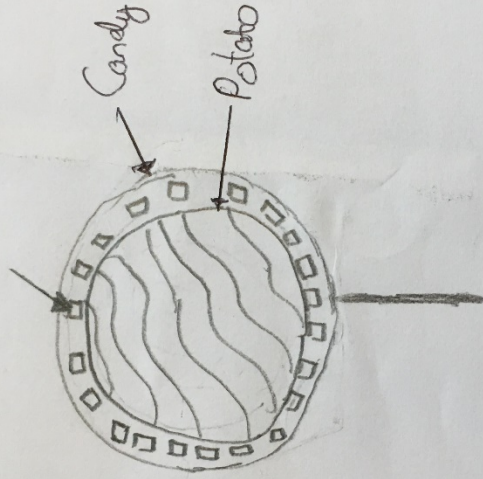


This pie includes some healthy ingredients which exist of cauliflower, apples. There will be hidden chocolate balls to add a sweet taste to the pie.

Idea 1

Potato Lollipop

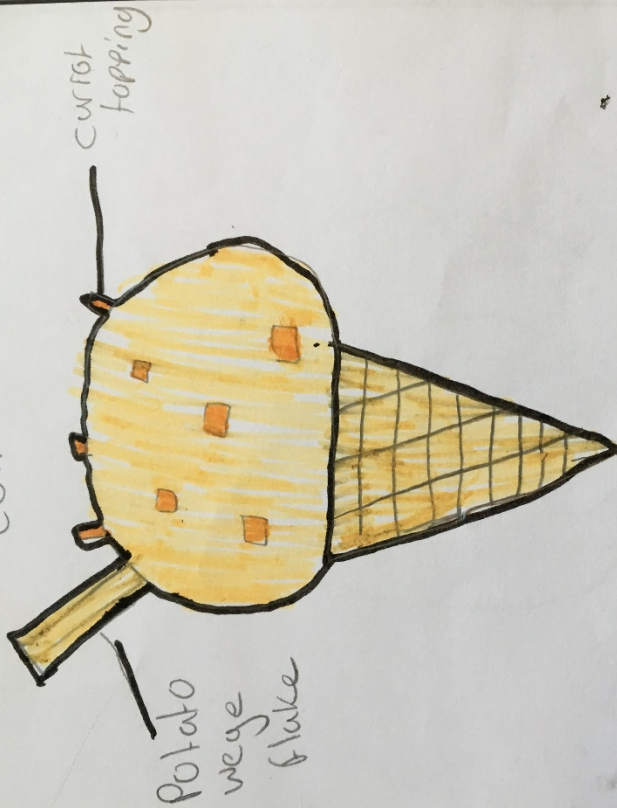
Chocolate,



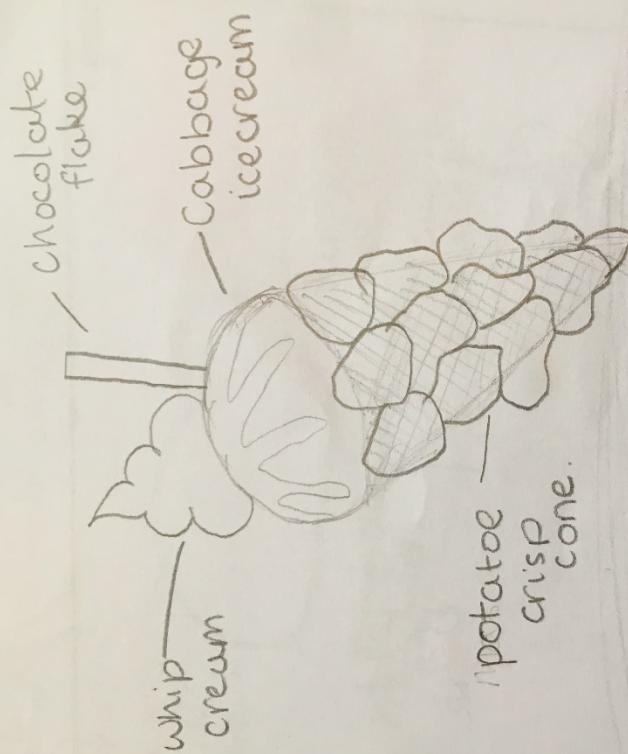
This Lollipop is made of candies with a good baked potato. This will make kids think that this is a sweet lollipop but when they reach the inside, the sweet potato will fill their mouths.

Idea 2

Colliflower ice cream

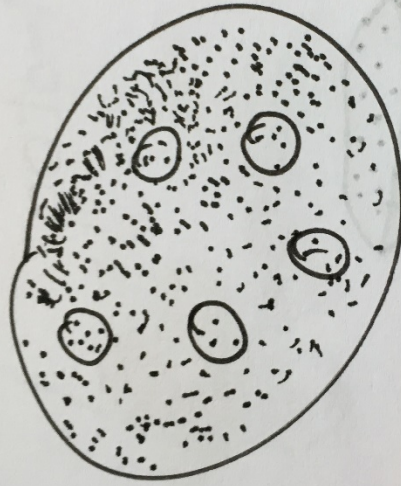


Idea 4



- The cone is made from potatoe crisp as a cone
- Whip cream and a chocolate flake
- Cabbage icecream.

vegetables included? Price? Packaging?



celiflower-based
pizza

Idea 2

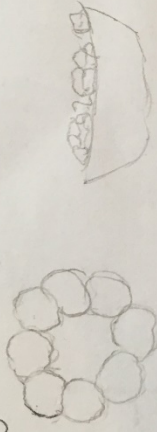
Potato Popcorn



They look like small pieces of popcorn but it's actually mashed potato inside nutshells which have been baked with spices for flavour

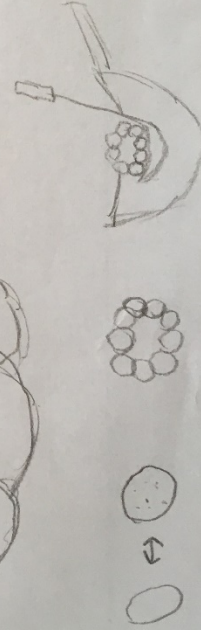
Idea 1

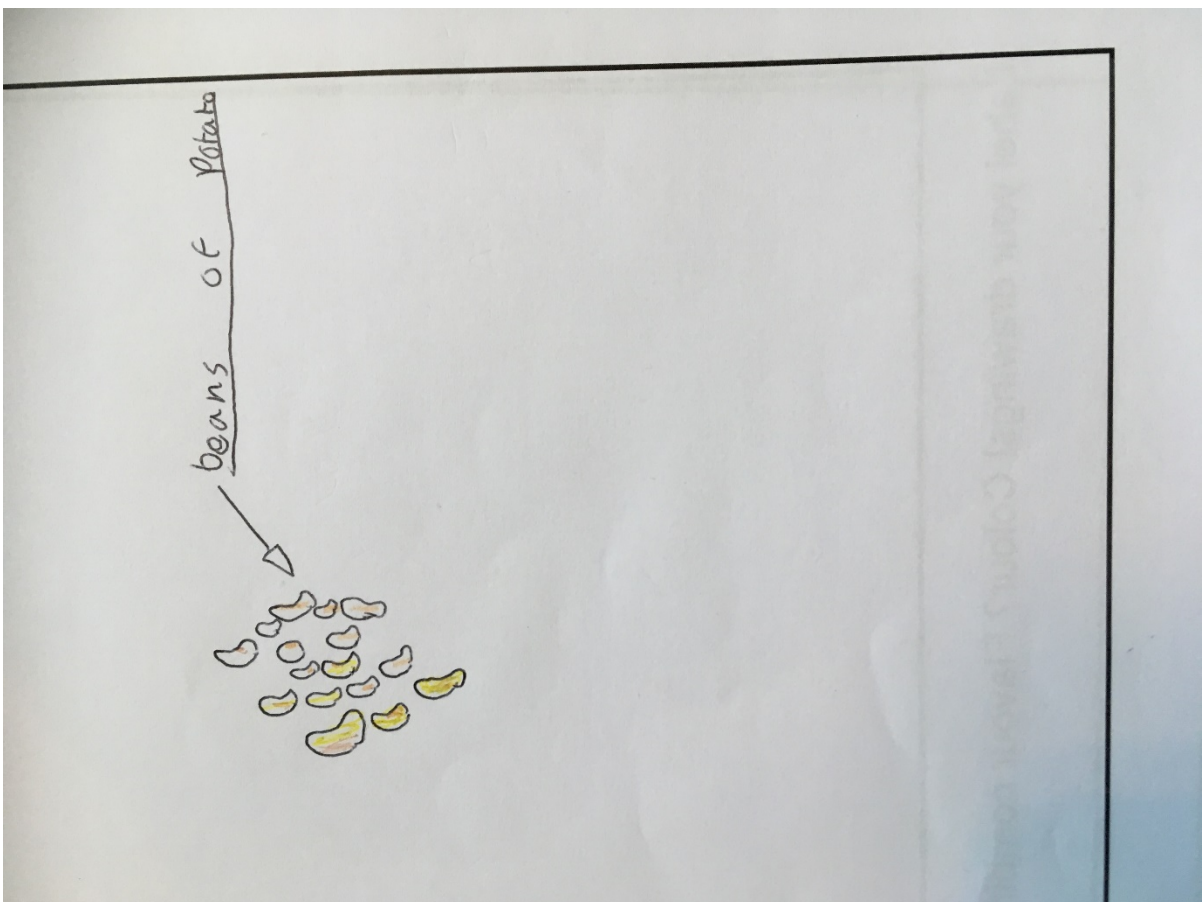
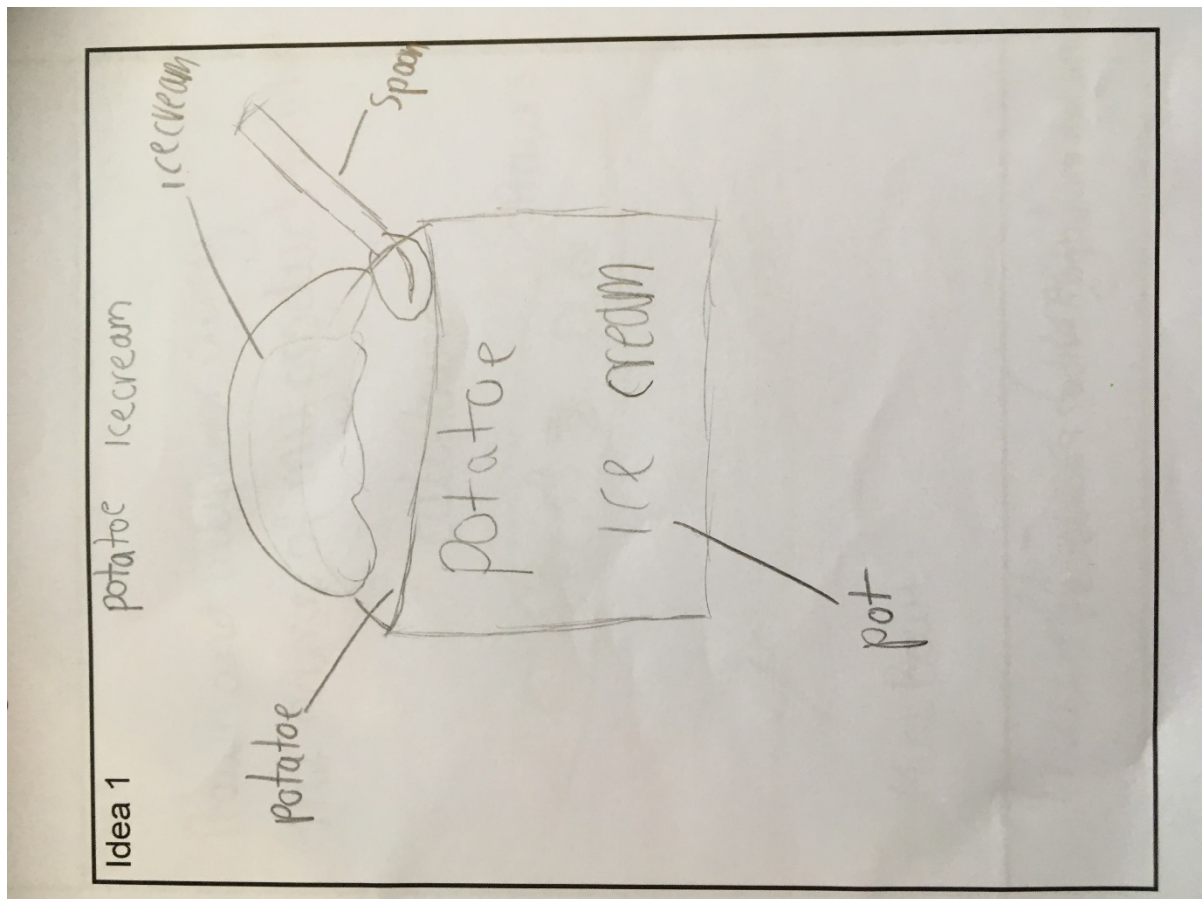
Poraro - Mixed into a sesame, blackseed, flax, ghee & syrup dough (sweet from Pakistan) shaped into ball flowers



~~Poraro & Cauliflower - Poris similar to Tikka (savoury sweet from Pakistan) on outside and cauliflower near inside.~~

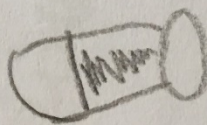
Poraro & Tikki
Dough balls
fried and together
(savoury)





age Set and

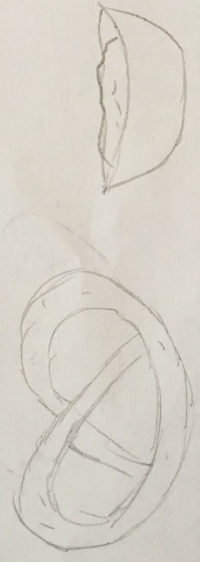
Cabbage
Smoothie



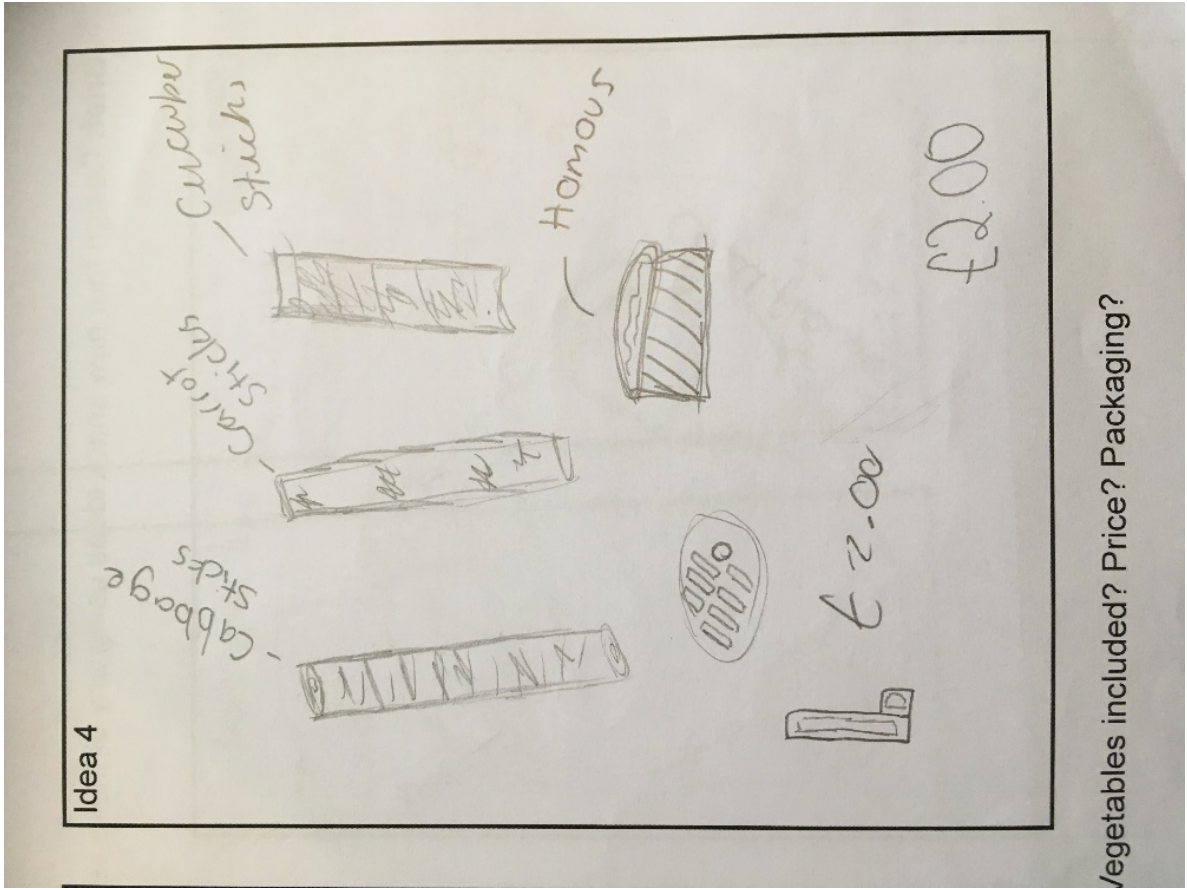
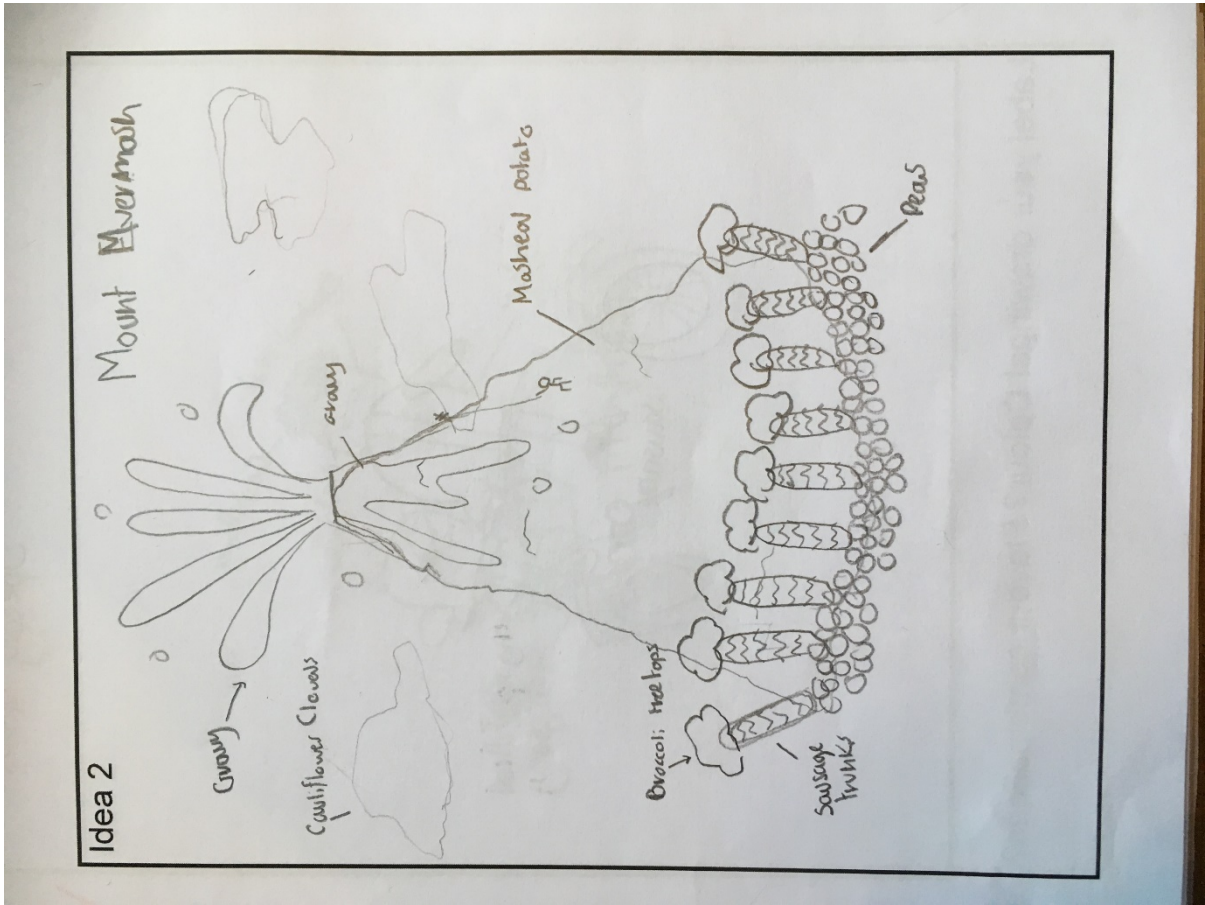
Idea 4

~~Cabbage Cabbage and noodles~~
~~with spices and soups~~

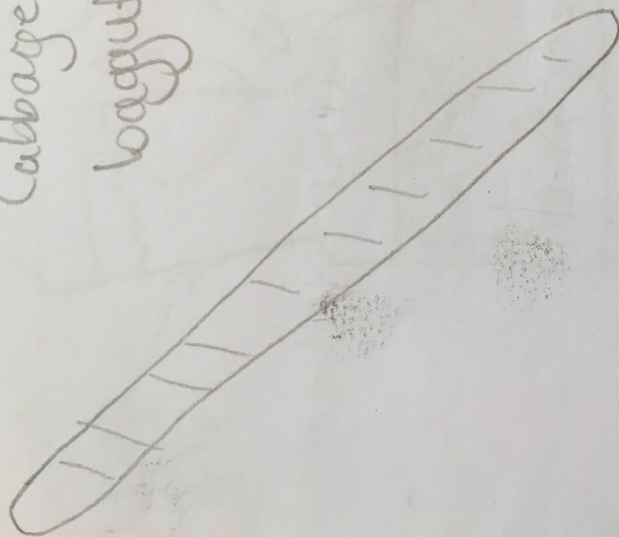
Potato - Potato and seasoning based
pretzels with a sour cream and chive dip



vegetables included? Price? Packaging?

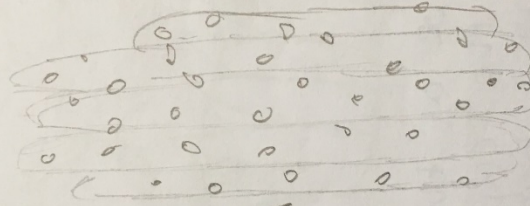


Cabbage Flavour
baguette



vegetables: cauliflower, potatoes and cabbage.

Idea 2



Breadstick
with
potato
bits.

Cabbage
and garlic
dip



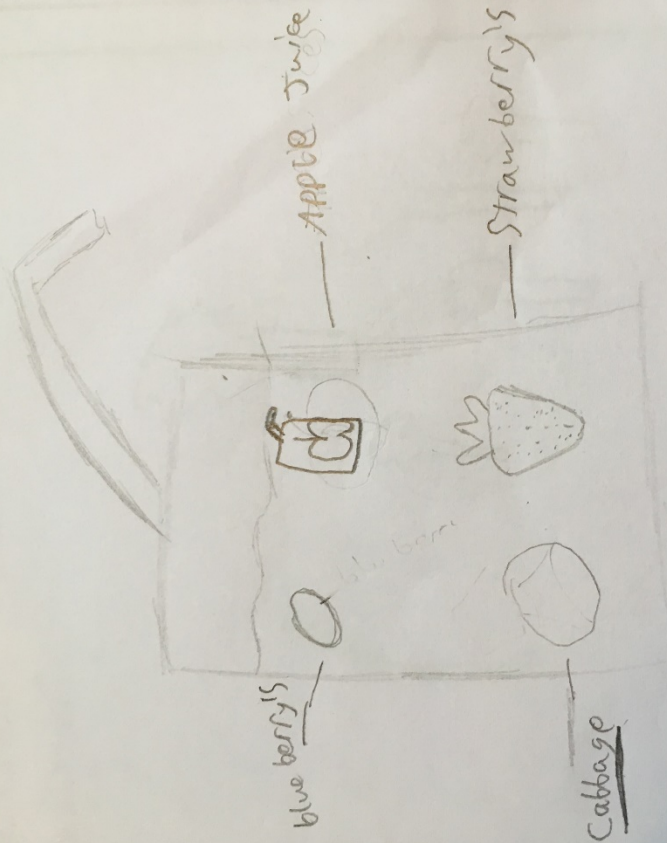
- Bread sticks made with Cabbage and potato bits.
- With a ~~cauliflower~~ side dip. Cabbage and garlic side dip.

Idea 1

doughnut that looks like a potato



Idea 2 Cabbage berry Smoothie



Idea 1

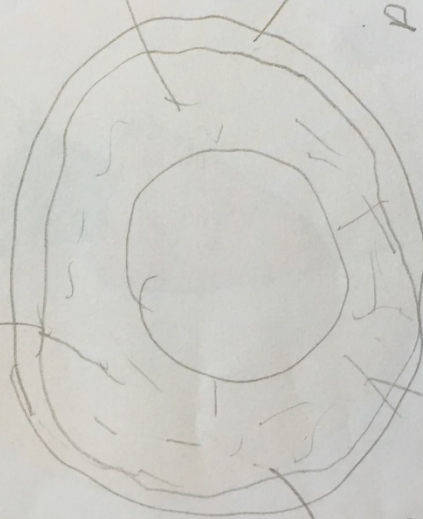
healthy doughnut

blueberries

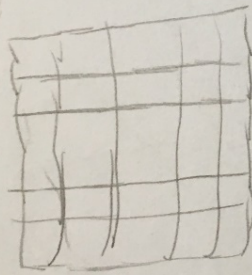
broccoli

potatoes
and
cologlow
base

~~potatoes~~
solidified
milk
cabbage



Chocolate
dipping sauce



Potato
waffle

Packaging: Recyclable box with hole for sauce

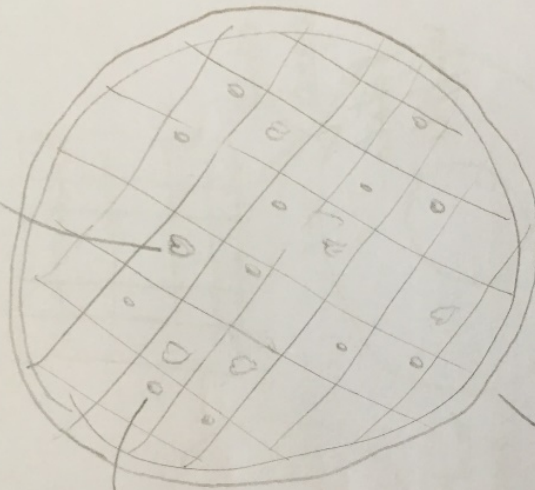
Price: \$6.00

Vegetables included? Price? Packaging?

Idea 1

Strawberries
on top

Blueberries
on top

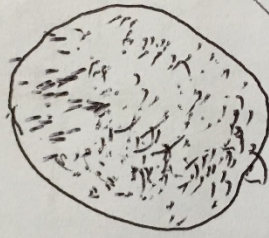


Pastry made of
mashed potato

Packaging: Recyclable

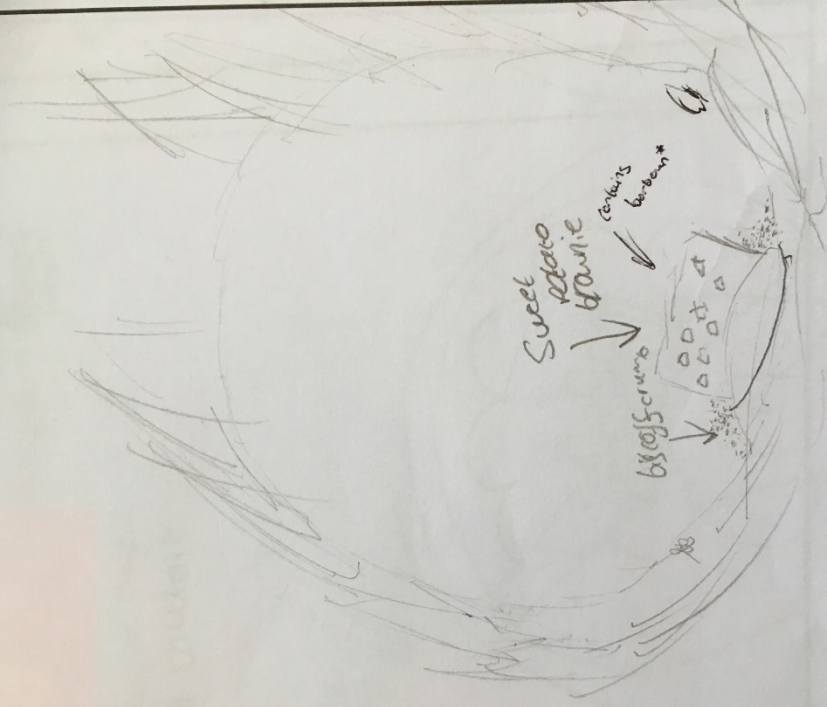
Price: £4.50

Cauliflower
breakfast
go ball



Contains
cauliflower
cocoa
hemp seeds
and chia seeds

Idea 1 Bombe à chou



can be done without bourbon upon request