

# Mobiliteach Sectoral

## Hospitality and STEAM Cross disciplinary didactics

Forth Teacher Training  
Bologna 7-10.03.22



7.10.22 FOOD  
SCIENCE AND  
SOCIETY lab

GIULIANO CARRADA, DANILO GASCA  
FONDAZIONE GOLINELLI



**FONDAZIONE  
GOLINELLI**  
l'intelligenza  
di esserci

**GOOD** for **FOOD**



**Comune di Bologna**



Scuola  
**è Bologna**

Progetto finanziato dal Fondo mense scolastiche biologiche  
MIPAAF – Comune di Bologna

WHAT WOULD  
YOU LIKE TO  
EAT ??



Portata		Scelta	Cesto Ambientale	
			IPPONIVA BOCCA	IPPONIVA CANTONIO
<b>Menù</b>				
<b>BEVANDE</b>				
		ACQUA IN CANTINA (0,5 L)		
		ACQUA GASSATA (0,5 L)		
		CAFFÈ (0,2 L)		
		COCA COLA (CANTINA) (0,33 L)		
		SACCO DI LIMONE (0,2 L)		
<b>PRIMO</b>				
		PASTA MARINIERA		
		ROSTO DI FICHI DI MARE E ZUCCHINE*		
		PASTA ALLA CARBONARA		
		ZUPPA DI LEGUMI PIATTI		
		POLENTA CON SBRAGIANDI		
<b>SECONDO</b>				
		CARNE ALLA GRIGLIA CON PRIME ERBE		
		POLLO AI FERRI CON MARE ARROSTO		
		SOGLIOLA IN GRAPPOLA CON PASTA LESSE		
		CAPIA AL FORNO CON PATATE AL FORNO*		
		WISALARA PASTA		
<b>DOLCE</b>				
		TORTA CON GOCCE DI CIOCCOLATO		
		YOGURT AI FRUTTI DI BOSCO		
		BACCHINI SOGHI		
		MARCHESE DI PESCI E ALMONDE		
		MANICAR IN FRUTTO		
<b>TOTALE</b>				
* PESCE SOSTITUIBILE IN BASE ALLA DISPONIBILITÀ DI MERCATO ALCUNI PRODOTTI POTREBBERO ESSERE SOSTITUITI				



**Wich is the ENVIRONMENTAL COST  
of our menu ???**

**ENVIRONMENTAL  
COST**



**ECOLOGICAL FOOTPRINT**

Each of us leaves our **FOOTPRINT** on environment, more or less large and profound depending on our lifestyle.

*How could we measure it ?*





## **Water Footprint**

Amount of water (H<sub>2</sub>O) used or polluted to get a product.

Water is a precious natural resource, the more water we consume the more our footprint increases



## **Carbon Footprint**

Amount of carbon dioxide (CO<sub>2</sub>) emitted to produce a given product

## DRINKS



**Glass of  
water**

**0,5 l** di H<sub>2</sub>O  
**0 g** di CO<sub>2</sub>



**Sparkling  
water**

**3,2 l** di H<sub>2</sub>O  
**60 g** di CO<sub>2</sub>



**Glass of  
Milk**

**206,6 l** di H<sub>2</sub>O  
**50 g** di CO<sub>2</sub>

**Coca-Cola**



**200 l** di H<sub>2</sub>O  
**170 g** di CO<sub>2</sub>

**Fruit juice**



**176,3 l** di H<sub>2</sub>O  
**100 g** di CO<sub>2</sub>

# FOOD PACKAGING : wich materials ?



Plastic, the boss



Paper and cardboard



Glass



Metals

## PLASTIC, CAN WE DO WITHOUT IT ?

- Plastic reduces food waste. It is estimated that by eliminating plastic from packaging materials we would have 80% more food wasted
- Plastic is lighter than other materials. This reduces the impact of food transport
- Plastic can be processed at low temperatures. This reduces the impact of packaging production on the environment
- Plastic is a material that can be engineered according to the specific conservation needs of a given food

**BUT WE SHOULD NOT EXAGGERATE!!!!**



## FIRST COURSE

### Pizza Margherita



**456 l** di H<sub>2</sub>O  
**520 g** di CO<sub>2</sub>

### Risotto frutti di mare e zucchine\*(seafood and zucchini risotto)

**531 l** di H<sub>2</sub>O  
**410 g** di CO<sub>2</sub>



### Pasta carbonara



**732,4 l** di H<sub>2</sub>O  
**550 g** di CO<sub>2</sub>

### Mixed legume soup

**405,6 l** di H<sub>2</sub>O  
**80 g** di CO<sub>2</sub>

### Polenta (maize porridge) con stracchino

**253 l** di H<sub>2</sub>O  
**80 g** di CO<sub>2</sub>



# SUPPLY CHAIN



**SUPPLY CHAIN:** articulated whole that includes the main activities, technologies, resources and organizations that contribute to the creation, transformation, distribution, marketing and supply of a finished product

## MAIN COURSE

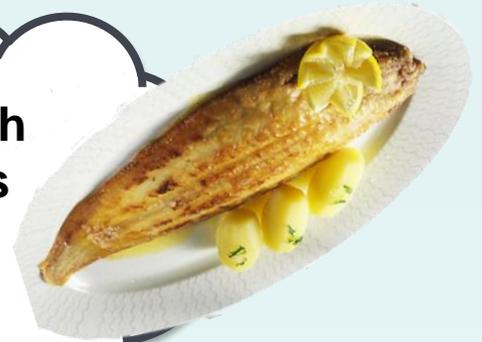
**Grilled steak with chips**

**2325,6 l** di H<sub>2</sub>O  
**960 g** di CO<sub>2</sub>



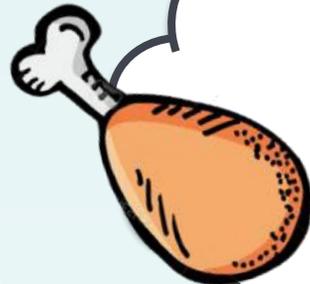
**Grilled sole with boiled potatoes**

**14,4 l** di H<sub>2</sub>O  
**300 g** di CO<sub>2</sub>



**Roasted chicken with baked potatoes**

**404,6 l** di H<sub>2</sub>O  
**310 g** di CO<sub>2</sub>



**Baked sea Bream with baked potatoes\***

**14,4 l** di H<sub>2</sub>O  
**650 g** di CO<sub>2</sub>

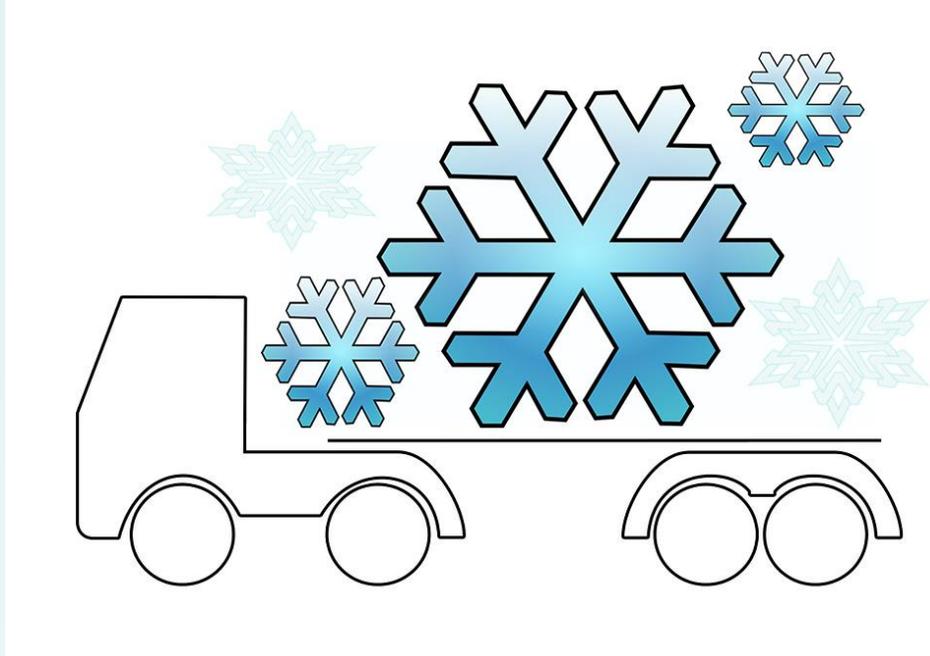


**Mixed salad**

**25,6 l** di H<sub>2</sub>O  
**240 g** di CO<sub>2</sub>



## COLD CHAIN



**Maintaining low temperatures in all phases, from transport to storage and passing, is essential and requires a lot of energy!**

**Freezing is one of the most energy-intensive conservation processes !!**

# Dessert

## Choccolate cake

465,7 l di H<sub>2</sub>O  
910 g di CO<sub>2</sub>



## Yogurt with berries

174,2 l di H<sub>2</sub>O  
770 g di CO<sub>2</sub>



## Biscuits

274,8 l di H<sub>2</sub>O  
240 g di CO<sub>2</sub>



## Fruit salad of peaches and apricots

180,3 l di H<sub>2</sub>O  
80 g di CO<sub>2</sub>



## Orange fruit

42,2 l di H<sub>2</sub>O  
60 g di CO<sub>2</sub>



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[www.fondazionegolinielli.it](http://www.fondazionegolinielli.it)