1. TEXTILE FIBRE

CARBON FOOTPRIN

RESEARCH:

a) **With the help of cards showing the label of various textile products, find out which fibers predominate and fill in the table.**

TEXTILE PRODUCT	TEXTILE FIBRE USED	MARK WITH + IF ARTIFICIAL/CHEMICAL FIBRES WERE USED
CHIRURGICAL MASK		
BANDAGE		
SURGICAL THREAD (not degradable)		
AN ARTIFICIAL LIVER	HOLLOW VISCOSE FIBERS	+
AN ARTIFICAL BONE		
MEDICAL PATCH		
KITCHEN CLOTH		
TABLE CLOTH		
TRAY GRIPPER		
AN APPRON		
CURTAINS		
PILLOW		
BLANKET		
COAT		

Legend:

Natural fibers:

- **Wool**
- **Cotton**
- **Silk**
- **Jute**
- **Hemp**

Artificial/chemical fibers:

- **Polyester**
- **Polyamide**
- **Elastane**
- **Acrilic**
- **Viscose**

A SHIRT		
SWEATER		
PANTS		
DRESS		
BELT		
SCARF		
CAP		
WALKING SHOES		
TIE		
SPORTS BACK		
AGROCOPRENE		
ROPES		
TEXTILE CAR UPHOLSERY		
BALOON		
PROTECTION EQUIPMENT FOR BEEKEEPERS		
HAMMOCK		
STINNING NETTLE		
BAGS FOR GROWING PLANTS		

Answer:

1. **Which fibers are dominant?**
2. **When buying textile products, do you pay attention to the composition of the raw materials?**
3. **Why do you act the way you do?**

2. TEXTILE INDUSTRY – IMPACT ON THE ENVIRONMENT

Which negative imapct could have textile industry in general on the environment, individuals and society? Create mind map.

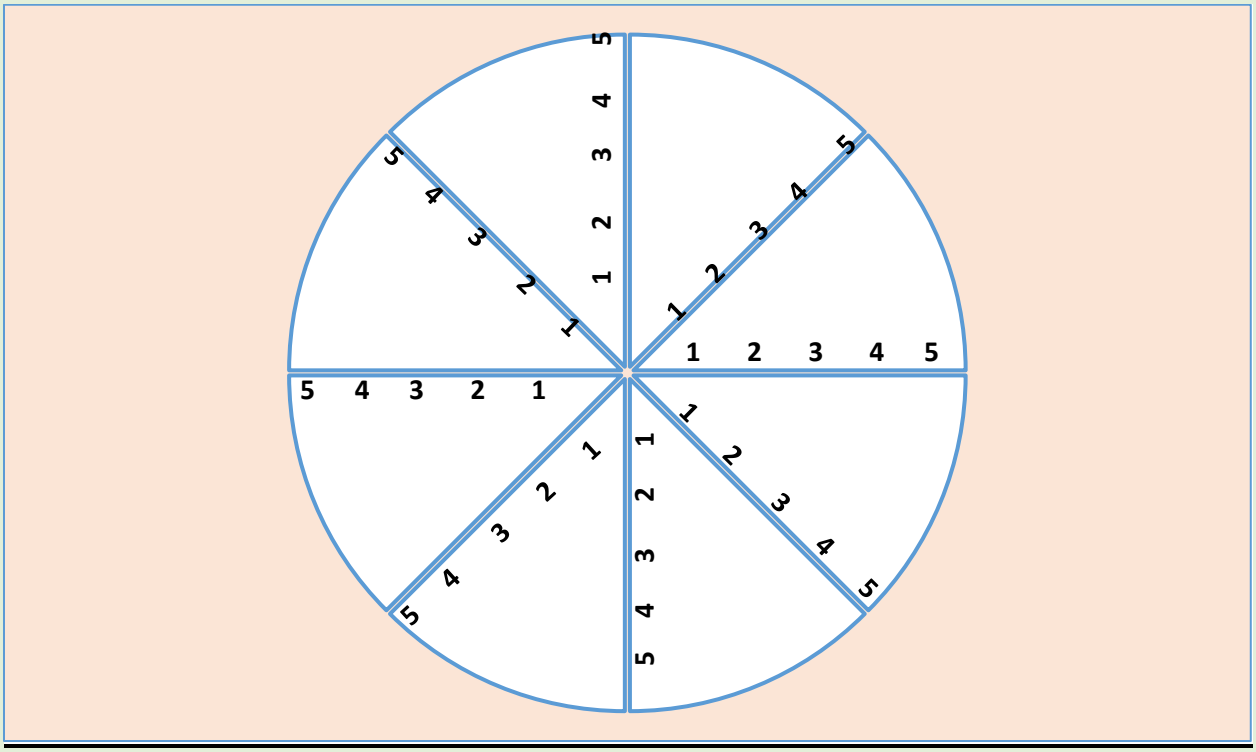
3. CONSUMER BEHAVIOUR - SUSTAINABLE TEXTILE BUYING

a) BUYING DECISION FACTORS

Group work:

a) **THINK AND DISCUS: How important are different factors in buying decision in your group (consider factors like are price, colour, raw material composition, brand,necessity of purchase,liking,having something that "everyone" has“…..**

b) **DRAW a circle with scales from 1- 5, ENTER THE FACTORS that are important to your group and SHOW THE IMPORTANCE of the factors by coloring individual sections.**



4. TEXTILE BUYING ALTERNATIVES

CASE STUDY

Manca (name of the girl) **took advantage of the Black Friday discounts and bought the following items of clothing:**

Windbreaker

Raw material composition:

Polyester 100%

Product weight: 330 g

T-shirt

Raw material composition:

Acrylic 100%

Product weight: 230 g

Coat

Raw material composition:

Polyester 54% Wool 46%

Product weight: 900 g

a) Calculate the CO_2 footprint of the clothes Manca buys. You will find the necessary information in the table below.

FIGURE 7.16 Carbon footprint of three different textile products during its life cycle. (From Jungmichel, N., *The Carbon Footprint of Textiles*, Systain Consulting, Berlin, Germany, 2010.)

TABLE 7.7
CO_2 Emissions in kg/kg of Different Textile Fibers Based on Energy Consumption (kW h/kg Fiber)

Fiber Type	Energy Consumption kW h/kg Fiber	CO_2 Emissions in kg/kg Fiber
Nylon	69	37
Acrylic	49	26
Polyester	35	19
Polypropylene	32	17
Viscose	28	15
Cotton	15	8
Wool	13	7
Hemp	5	3

Source: http://www.metrocon.info/images/uploads/SWhittaker-METROCON12.pdf, accessed on March 11, 2014.

The product	The proportion of individual fiber in the product	C02 emissions kg/kg fiber	CO2 emissions of purchased product
Windbreaker	330g	19	0,330 kg fiber x 19 kg CO2/kg fiber =
T- shirt			
Coat			
		Total:	

b) Which product has the largest environmental footprint?

c) Was the purchase made by Manca optimal from the point of view of reducing the carbon footprint? Justify your answer.

d) Advise Manca on how to shop in the future to reduce her environmental footprint.

e) Check the fibre composition of your clothes and assess how sustainable they are. Look at the labels on your clothes.

5. DEVELOPMENT OF LEARNING MATERIALS

Think: How can we teach sustainable consumption in school?

Prepare educational material for teaching: Keep in mind your class, differentation and/or scaffold...

Submit your products to the online classroom.

Sustainable Competences in Higher Education.

'SustainComp Curriculum'

Erasmus+

MUNI Masaryk University

University College

SustainComp

UiA University of Agder

University of Ljubljana