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RESOURCE AREA FOR TEACHING

Name:_____   Date:_____

Project/Unit: Natural to Synthetic   Lesson: Life Cycle Analysis

In a Life Cycle Analysis (CLA) there are the five major categories used by researches to understand the environmental impact of a product . Review these categories with your group, and share questions and thoughts you might have.

Five major stages of a product's life cycle
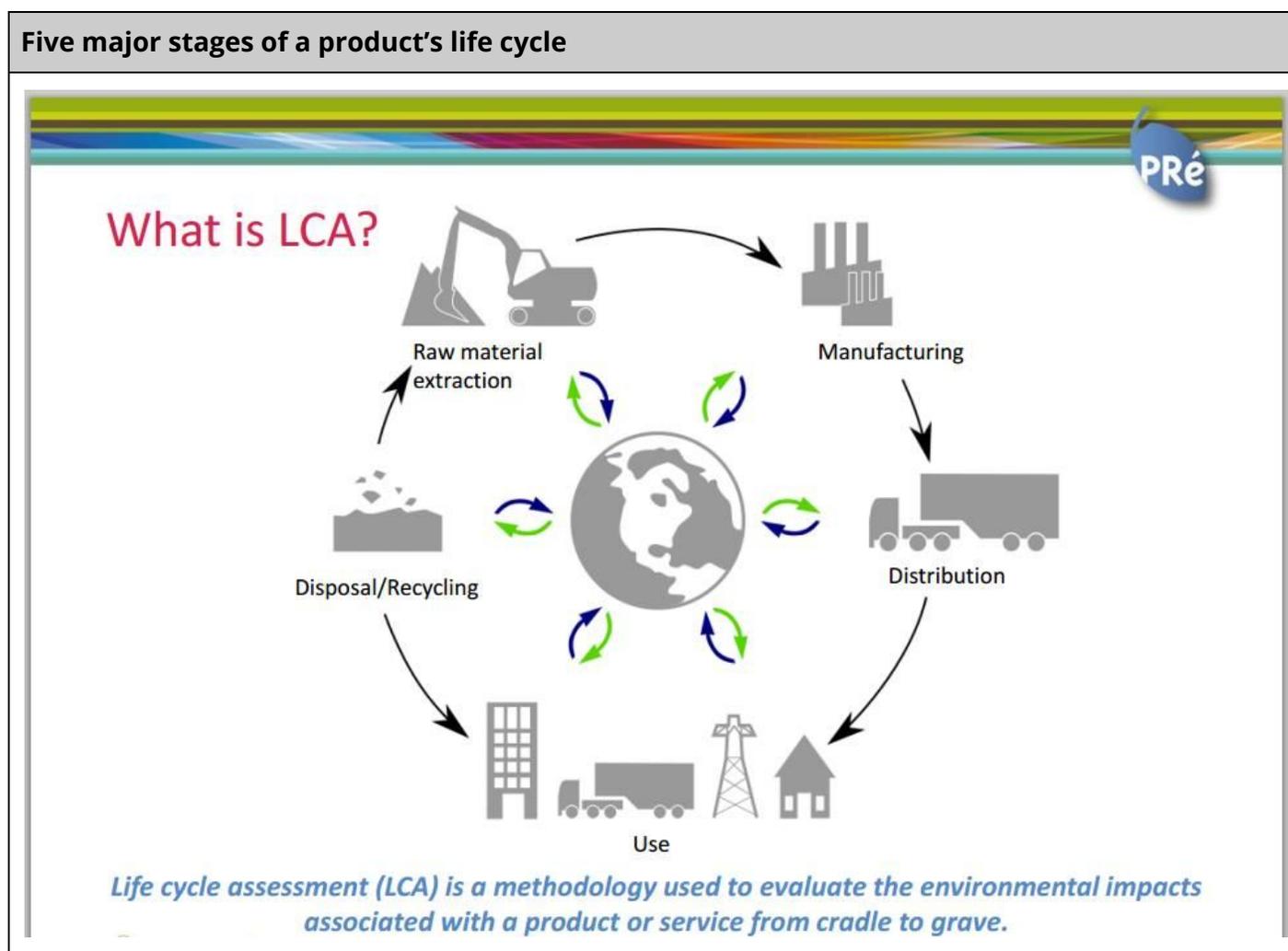
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Name:_____   Date:_____

Select one article of clothing, and look at the tag, list all the materials it is made out of, and include the percentages. With you team, research for the information asked for, and use the scoring system to organize and weight the information.

Your article of clothing:	
List materials:	*Natural or synthetic?*
1.	
2.	
3.	
4.	
5.	
6.	

Scoring System		
Give 1 point, for every material that is listed.	All materials that are synthetic, get an additional 1 point.	Total
_____pt	_____pt	_____ NET points

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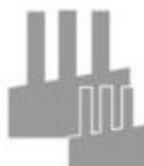
Name:_____   Date:_____

For every material that the item is made out of, research with your team, and enumerate how many steps is needed to manufacture the material, write a description of what those steps are.

Steps in Manufacturing		
Material:_____	Material:_____	Material:_____
List steps to produce materials...	*List steps to produce materials...*	*List steps to produce materials...*
Give a point for every step listed.	Give a point for every step listed.	Give a point for every step listed.
_____pt	_____pt	_____pt

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Name:_____   Date:_____
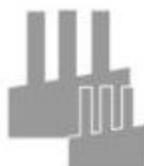
For every material that the item is made out of, research with your team, and enumerate how many steps is needed to manufacture the material, write a description of what those steps are.

Steps in Manufacturing		
Material:_____	Material:_____	Material:_____
Give a point for every step listed.	Give a point for every step listed.	Give a point for every step listed.
_____pt	_____pt	_____pt

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Name:_____   Date:_____

List the materials you have.	Write down the point total for each material.
Material:_____	_____pts
Material:_____	_____pts
Material:_____	_____pts
Material:_____	_____pts
Material:_____	_____pts
Material:_____	_____pts
	Add up the points for each material, and total it in the yellow box below.
	_____NET points

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Name:_____   Date:_____

Which country was your item made in?	Country:
Calculate the distance between that country and your school.	Miles:
For every 100 miles give yourself .10 points.	NET Points: _____

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Name:_____   Date:_____

With your team, research and find the information asked for below. Fill out the averages and then compute the points.

Uses			
What is the average life expectancy of your item?	_____yrs	Give a point for every year your item is expected to last.	_____pts
What is the average number of washes your item is expected to go through in its' lifetime?	_____washes	If your item needs more than 50 washings, add an additional 5 points.	_____pts
How many gallons of water is used in each washing?	_____gallons per wash	Multiply the average washes by the numbers of gallons of water per cycle. Give your 1 point for every 20 gallons.	_____pts
			Add the total numbers from above, and write the Net total below.
			_____NET points

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Name:_____   Date:_____

With your team, research and find the information asked for below. Fill out the averages and then compute the points.

List materials	Your long will it take the material to decompose?	For every year, add 1 point.	Is item recyclable?	If yes, subtract 10 points.	Total
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
Material: _____	_____yrs	___points	Y/N?	____pts	_____pts
					Add, up the total from this column, and write in your Net total in the column below.
					_____ NET points

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Name:_____   Date:_____

Final Life Cycle Analysis Score					
Raw Material	Manufacturing	Distribution / Transportation	Use / Maintenance	Disposal / Recycling	Final Score (add the points together to get the final score on your item)
_____ NET points	_____ NET points	_____ NET points	_____ NET points	_____ NET points	_____ FINAL LCA SCORE

Next Step:

Pick out another article of clothing and put it through the LCA tool, compare the final score of both articles of clothing afterwards.