Module 2: Study Circle Part 1
Energy Use in Daily Life: Clothing
The purpose of this study circle is to understand the impact of our clothes on the planet and how we can be more responsible to make the planet more sustainable.
Why do we wear clothes?

Physical Needs
- Protection
- Safety

Social Needs
- Fitting in

Psychological Needs
- Adornment
- Cultural identity
What is the source of clothing fibres?

Natural Fibres

- Mohair - Angora goats/hairs
- Cotton - cotton plant
- Linen - flax plant
- Wool - sheep
- Cashmere - cashmere goats
- Silk - silkworms
- Hemp - hemp plant
- Leather - animal hide
- Jute - jute plant

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What is the source of clothing fibres? contd.

**Synthetic Fibres**

- Rayon/Viscose - Modified fibres from soy/sugarcane/bamboo plants
- Polyester
- Nylon
- Spandex
- Polypropylene
- Polyethylene
- Vinyl
Lifecycle of our clothes

1. Petroleum extraction
   - Chemical Synthesis
   - Polyester
   - Monomer and Polymer separation
   - Fibre Extrusion
   - Dyeing
   - Transport
   - Sewing
   - Packaging
   - Retail
   - Consumer
   - Recycling
   - Repair/Re-purpose
   - Landfill

Source: Adapted from http://buddhajeans.com/encyclopedia/life-cycle-map-t-shirt-cotton-graphics/
Energy & Resources Use in Clothing and the Environmental Impact

https://www.youtube.com/watch?v=NXTIlfcfzSnE
Video duration – 3 mins 43 secs
Environmental Impact of Clothes

- **68 POUNDS**: The amount of clothing that the average American discards each year, 85% of which ends up in landfills or incinerators.

- **700 GALLONS**: The amount of water it takes to produce a single cotton T-shirt.

- **2.6%**: The percentage of global water used for growing cotton.

- **4%**: The percentage of global landfills that are filled with clothing and textiles.

- **99%**: The estimated percentage of used clothing that is recyclable.

- **17-20%**: The estimated percentage of industrial water pollution that comes from textile dyeing and treatment.

- **8,000**: The estimated number of synthetic chemicals that are used worldwide to turn raw materials into textiles.

- **60,000,000**: The estimated number of people who work in the fashion industry worldwide.

Source: Conscious Company Media
Why do we buy more clothes than we need?
What changes can we make?

Refuse
Reduce
Reuse
Recycle
Repurpose
What changes can we make? contd..

Ceiling on Desires
Don’t Waste Energy
Don’t Waste Time
Don’t Waste Food
Don’t Waste Water
Don’t Waste Money

Start by asking yourself- Is it a need or want?

Need
Acquire what require only you

Want
Deploy the principles of “COD”

Sublimation
# Reducing Energy Impact of Clothes

Cultivation or extraction of natural resources for production of fabrics, manufacturing, distribution and disposal - all require energy.

<table>
<thead>
<tr>
<th>REFUSE</th>
<th>REDUCE</th>
<th>REUSE</th>
<th>REPURPOSE</th>
<th>RECYCLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do I need it?</td>
<td>Cut down your needs</td>
<td>Wear handed down clothes</td>
<td>Repair, alter into different style or modify it to fit a different use</td>
<td>Recycle what can’t be reused or repurposed - it diminishes the need for mining/extraction of natural resources and energy use</td>
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<tr>
<td>Can I afford it?</td>
<td>Donate</td>
<td>Donate clothes to a charity that can redistribute it</td>
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<tr>
<td>Will I use it?</td>
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<td>Is it worth it?</td>
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<td>Will it last longer?</td>
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<td>Can I borrow it instead?</td>
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This video is an example: [https://www.youtube.com/watch?v=DesGx5lpMWQ](https://www.youtube.com/watch?v=DesGx5lpMWQ) (Duration 1:24 minutes)
Recap

► Why do we wear clothes?
► Where do the fibres that make up our clothes come from?
► Lifecycle of the clothes that we wear
► Energy consumption and environmental impact of clothes
► Why do we buy more clothes than we need?
► What changes can one make?
In PART 2 of Module 2 study circle series, we will cover: Energy & Food

► To what extent Energy is used in the ‘food sector’
► How does this affect climate change and pollution, as a result of energy use?
► Are renewable sources the answer?
► What can we do daily to reduce our energy footprint in relation to food, and serve Mother Earth?