# Types of Plastics

Eco 360 Jr
Learner Handout
Grade Level: 3-8

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| **1. Polyethylene Terephthalate (PETE or PET)**<br><br>  <br><br>(Plastics Industry Association, 2021). | PET is a widely used plastic material. It is lightweight, strong and often clear. The common application of PET is food packaging, such as water bottles, and fabrics in the form of polyester (Plastics Industry Association, 2021). |

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| **2. High-Density Polyethylene (HDPE)**<br><br>  <br><br>(Plastics Industry Association, 2021). | High density Polyethylene HDPE is the strongest kind of polyethylene. Its strength and resistance to moisture make is an effective material to use for food packaging – most commonly used for beverage containers, such as storing milk as the gallon milk jugs are usually created from HDPE. Other applications include making pipes and plastic lumber to withstand extreme weather conditions and changing temperatures (Plastics Industry Association, 2021). |
| **3. Low-Density Polyethylene (LDPE)**<br><br>  <br><br>(Plastics Industry Association, 2021). | Low-Density Polyethylene (LDPE) “is a softer, clearer, more flexible version of HDPE—and it has its own strengths as well. It's often used as a liner inside juice and milk cartons, and it's used in other products, such as six-pack rings and plastic wrap” (Plastics Industry Association, 2021). |

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| **4. Linear Low-Density Polyethylene (LLDPE)**<br><br>  <br>(Plastics Industry Association, 2021). | LLDPE is created by changing the chemistry of LDPE. LLDPE is most commonly used in plastic bags as they are tear and puncture resistant. Other common applications include using them for toys, pouches, and cable applications as they also hold well against chemical solvents (Plastics Industry Association, 2021). |
| **5. Polyvinyl Chloride (PVC/vinyl)**<br><br>  <br>(Plastics Industry Association, 2021). | "PVC is an incredibly durable material that's resistant to weathering, which is why it's so often used in building and construction applications. Common uses include flooring; siding; and indoor and outdoor plumbing, which uses PVC pipe. It's also resistant to chemicals and doesn't conduct electricity, making it crucial for use in high-tech applications, such as wire and cable. It's widely used in medical applications today because it's impermeable to germs, is easily cleaned and provides single-use applications that reduce infections in healthcare" (Plastics Industry Association, 2021). |

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| **6. Polypropylene (PP)**<br><br>  <br>(Plastics Industry Association, 2021). | "PP is more heat resistant than some other plastics, making it ideal for use in food packaging and food storage that's made to hold hot items or be heated itself.<br><br>It's another plastic that's chemically inert and durable, particularly when a product needs to be opened, closed or bent—like a hinge repeatedly (think of a DVD box). PP stretches to allow a consumer access to a product inside but retains its shape and strength for a long time" (Plastics Industry Association, 2021). |
| **7. Polystyrene or Styrofoam (PS)**<br><br>  | "Polystyrene is among the most diverse plastic materials, able to be processed in a way that produces packing peanuts, home insulation and even red party cups. It's also one of the only materials that can be recycled or chemically processed to return back to its original state. All of these materials are recyclable, but often the process of recycling can cause some of them to lose important characteristics. In certain processes, used PS can be returned to its original state, losing none of the properties that made it so useful and diverse in the first place" (Plastics Industry Association, 2021). |

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| (Plastics Industry Association, 2021). | |

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https://plasticactioncentre.ca/directory/plastic-by-the-numbers/