CITY OF CAPE TOWN
ISIXEKO SASEKAPA
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TOXIC | ENVIRONMENTAL HAZARD | POISONOUS | HARMFUL | CORROSIVE

BATTERY WASTE

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More and more batteries are found in our daily lives. From your cellphone to your car, from the torch you use for camping to the watch on your wrist – batteries are a part of everyday life.

All batteries contain a mixture of heavy metals (like zinc, lead, nickel, manganese, cadmium, silver and mercury) and chemicals (sulphuric acid for example) to power the device they are connected to. As we have all found out, sooner or later every battery reaches the end of its life and has to be disposed of.

Proper disposal of used batteries is important as the metals and chemicals they contain can be hazardous to the environment.
The following disposal methods are advised:

BATTERY TYPE	CHARACTERISTICS	METHOD OF DISPOSAL
LEAD ACID or GEL BATTERIES 	Have a hard plastic casing and contain mainly lead and sulphuric acid, either in liquid or gel form. HANDLE with care due to the very corrosive nature of the sulphuric acid.	Can be recycled and many dealers accept spent batteries. Use a municipal drop-off site that handles hazardous household waste.
DRY-CELL BATTERIES: (non-rechargeable) 	Used in small electronic appliances and need to be replaced when empty/flat. Cannot be recharged. Not usually hazardous when handled or used, except when damaged or disposed of irresponsibly.	Find a retailer accepting batteries for recycling. Use a municipal drop-off site that handles hazardous household waste.
DRY-CELL BATTERIES: (rechargeable) 	Can be re-used many times after recharging with a suitable charger, and therefore cost-saving. Particularly suited for appliances that are used often such as music players and cameras. Chemically similar to non-rechargeable alkaline batteries. Tend to contain heavy metals such as nickel and cadmium.	Find a retailer accepting batteries for recycling. Use a municipal drop-off site that handles hazardous household waste.

GENERAL TIPS, TRANSPORT AND HANDLING

GENERAL TIPS:

- Avoid batteries wherever possible - it takes between 40 and 500 times as much energy to produce a battery than what it takes to produce energy to the end user.
- Avoid buying batteries that are harmful to the environment, such as those containing mercury (older types of alkaline batteries) or cadmium (as in NiCd batteries), for example.
- Rather buy suitable rechargeable batteries, than one-way non-rechargable ones.
- When buying cordless power tools, avoid tools powered by the cheaper, but harmful NiCd batteries.
- Make sure that you use and charge your rechargeable batteries correctly – they will last longer.

TRANSPORT & HANDLING:

- Handle all batteries with care as they may contain harmful metals, strong acids or strong alkalis.
- Store unused batteries in their original packaging.
- Store and transport used batteries in a plastic or cardboard leak-proof container.
- Car batteries must always be handled, stored and transported in an upright position.
  Lithium battery terminals must be taped up when stored or disposed of.
  The lithium reacts violently with air and water and may burn or explode - never open these batteries or expose to very high temperatures or water.
- If a battery leaks, place it in a container with an absorbent material such as sand.

TECHNICAL TABLE OF BATTERY TYPES

TYPE	COMMON NAME /CHARACTERISTICS	USES
ALKALINE (not rechargeable)	Alkaline, coppertop • Low self-discharge rate (i.e. when not in use)	Torches, calculators, toys, clocks, remote controls, etc.
BUTTON (not rechargeable)	Mercuric oxide, silver oxide, lithium alkaline, zinc-air	Watches, hearing aids, toys, greeting cards, remote controls
CARBON ZINC (not rechargeable)	Classic , heavy duty, general purpose, all purpose, power cell • Low-efficiency battery	Torches, calculators, toys, clocks, smoke alarms, remote controls, radios, driveway door openers
LITHIUM (not rechargeable) **(not be confused with lithium ion battery below)**	High performance battery used for special applications	
LLITHIUM ION (rechargeable)		Lap tops, cellphones and power tools
NICKEL-CADMIUM (rechargeable)	Ni-Cd (Nicad) • High self-discharge rate (i.e. when not in use)	Torches, toys, cellphones, power tools, computer packs
NICKEL-METAL HYDRIDE (rechargeable)	Ni-MH • High self-discharge rate	Torches, toys, cell phones, power tools, computer packs
ALKALINE MANGANESE (rechargeable)	Reusable alkaline manganese (RAM) • Low self-discharge rate (LSD) • Low number of recharge cycles	Torches, calculators, toys, clocks, radio, remote controls
LEAD ACID AND GEL batteries(rechargeable)		Vehicles, alarm systems, wheelchairs, and clocks