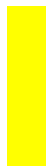

A Presentation on

ENVIRONMENTAL STEWARDSHIP



It's Our Environment Let's Take Action



Introducing Environmental Stewardship

- Stewardship of the environment refers to protecting the environment through recycling, conservation, regeneration, and restoration.
- It means taking responsibility for our choices.
- The responsibility for environmental quality should be shared by all those whose actions affect the environment.



Defining Environmental Stewardship

- Organizations putting systems in place that will enable them to:
 - ❑ Use resources efficiently
 - ❑ Reduce waste and minimize on the negative impacts on the environment
 - ❑ Translate reduced consumption and waste into financial savings
 - ❑ Provide a healthy, more efficient and effective working environment

Defining Environmental Stewardship

- Embodies the concept of a Green Office, a Green School or Green Home which is conceptualized as smarter and better as it is:
 - ❑ Ecological - using non-toxic, recycled, environmentally friendly products and supplies
 - ❑ Efficient – using as little energy and other resources as possible and putting out the smallest amount of waste as possible
 - ❑ Healthy – will generate as little visual, noise and physical pollution as possible

Environmental Stewardship

Concepts and Definitions

- 3Rs
- 6Rs
- Conservation
- Eco-efficiency
- Environmentally Preferred Products and Services
- Environmental Steward



Environmental Stewardship

Concepts and Definitions

- Green Building
- Green Office
- Green Procurement
- Green Purchasing
- Life Cycle Costing
- Recycling
- Resources



Principles of Environmental Stewardship

Core Principle 1: Resource Conservation – making the most efficient use of resources (materials, energy and water) through:

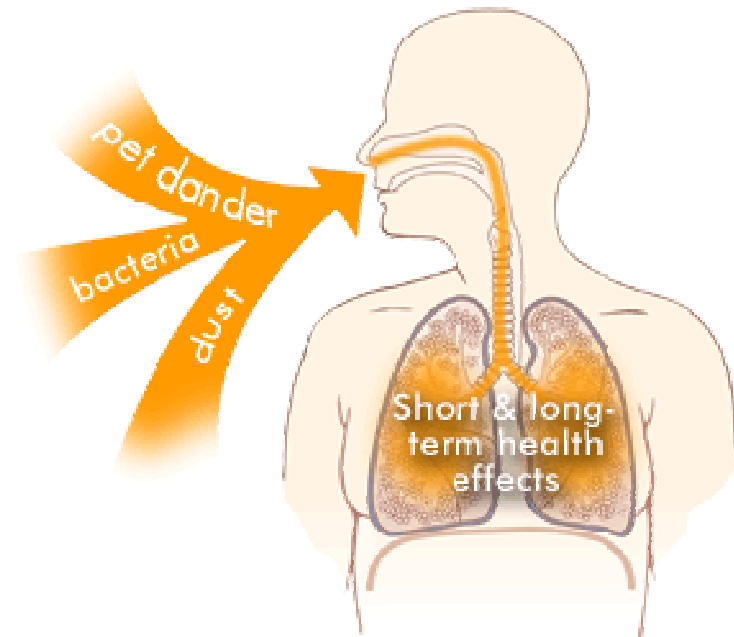
- ❑ Energy Efficiency and Conservation
- ❑ Water Efficiency and Conservation
- ❑ Solid Waste Management and Conceptualizing Waste as a Resource
- ❑ Publications Management
- ❑ Events Management



Principles of Environmental Stewardship

- Core Principle 2: Pollution Prevention – minimizing contamination of the environment by chemicals or other materials through:
 - ❑ Vehicle/Fleet Management
 - ❑ Management of the Use of Chemicals and Other Hazardous Substances

- Core Principle 3: Occupational Health and Safety
 - ❑ Managing Indoor Air Quality
 - ❑ Comfort and Productivity in the Workplace
 - ❑ Emergency and Disaster Management



Benefits of Implementing an Environmental Stewardship Programme

- There are three benefits of implementing an environmental stewardship programme. These include:
 - Economic Benefits
 - Human Health Benefits
 - Protection and Conservation of the Environment



ENERGY EFFICIENCY AND CONSERVATION



Two Important Definitions – Energy Conservation & Energy Efficiency

- Energy Efficiency - the efficient conversion and use of energy- a measure of the productivity provided per unit of energy consumed. It employs devices and practices, which result in less energy being used for the same task or function. An example -a fluorescent bulb as opposed to an incandescent bulb. Capital improvements and retrofits can also enhance energy efficiency.
- Energy conservation is the saving of energy by any means including energy efficiency – it could also entail being more frugal – for example, turning lights off when not in use.



Guidelines for Energy Management

- Indoor Lighting
- Outdoor Lighting
- Cooling and Ventilation
- Computer Equipment, Photocopiers, Printers and Fax Machines



Please remember to turn off:
Printer • Fax Machine
Copier • Scanner
Radio • Lights

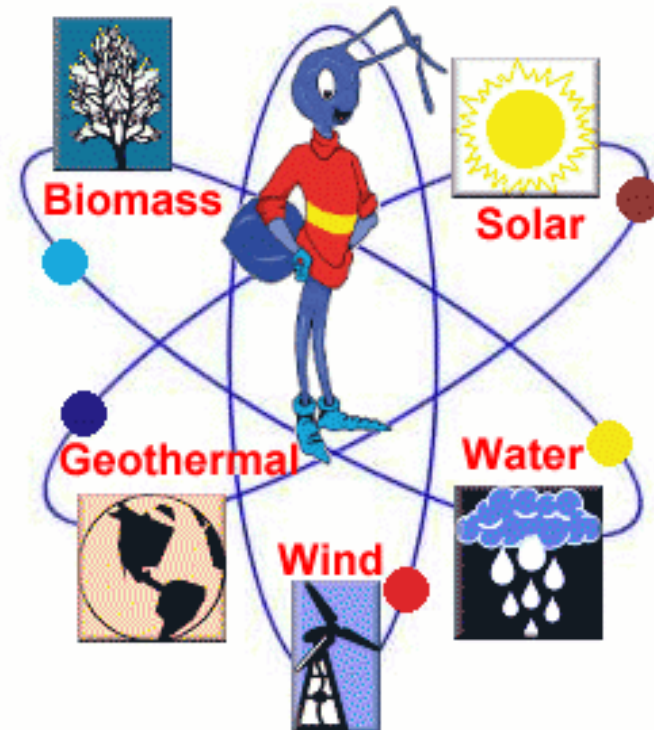
UTMB
Energy Conservation
Power Team

UTMB
The University of Texas Medical Branch at Galveston

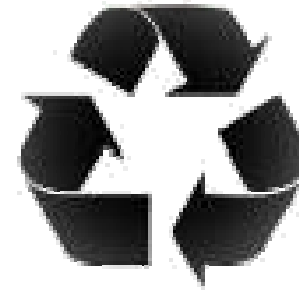
- Food Service and Refrigeration Equipment
- Building Design

Sources of Energy

- Sources of energy fall into two categories, namely:
 - Conventional Energy Sources – also referred to as non-renewable energy
 - Environmentally Preferably Sources – also referred to as renewable energy sources



SOLID WASTE MANAGEMENT & CONCEPTUALIZATION OF WASTE AS A RESOURCE



Concepts Related to Waste

- Zero Waste
- Waste as a Resource
- Waste Management
- Waste Characterization
- Waste Minimization



Importance of Waste Management

- Resource Conservation
- Environmental Protection
- Land use Control
- Protection of Human Health and Well-Being
- Economic benefits



Waste Streams

- Gaseous Waste eg NO_2 , CO_2 , SO_2 , Methane may pollute the air and subsequently, land or water
- Liquid waste eg sewage and trade effluent or other industrial waste such as waste oils
- Solid waste including most household and commercial waste
- Note: Waste from an office or construction site may fall into any of the three categories.
- Note: Hazardous waste refer to any category of waste that pose an immediate threat to human life to that of biodiversity in general

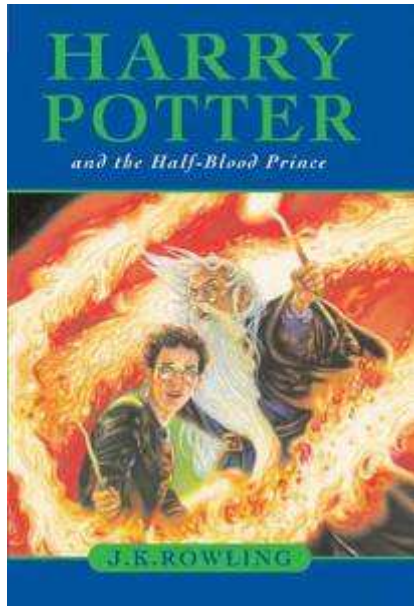
Recycle Signs – Meanings



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ARTUEX.COM



Recycled Products



THE CLASSIC
BLACKSPOT SNEAKER



Occupational Health and Safety

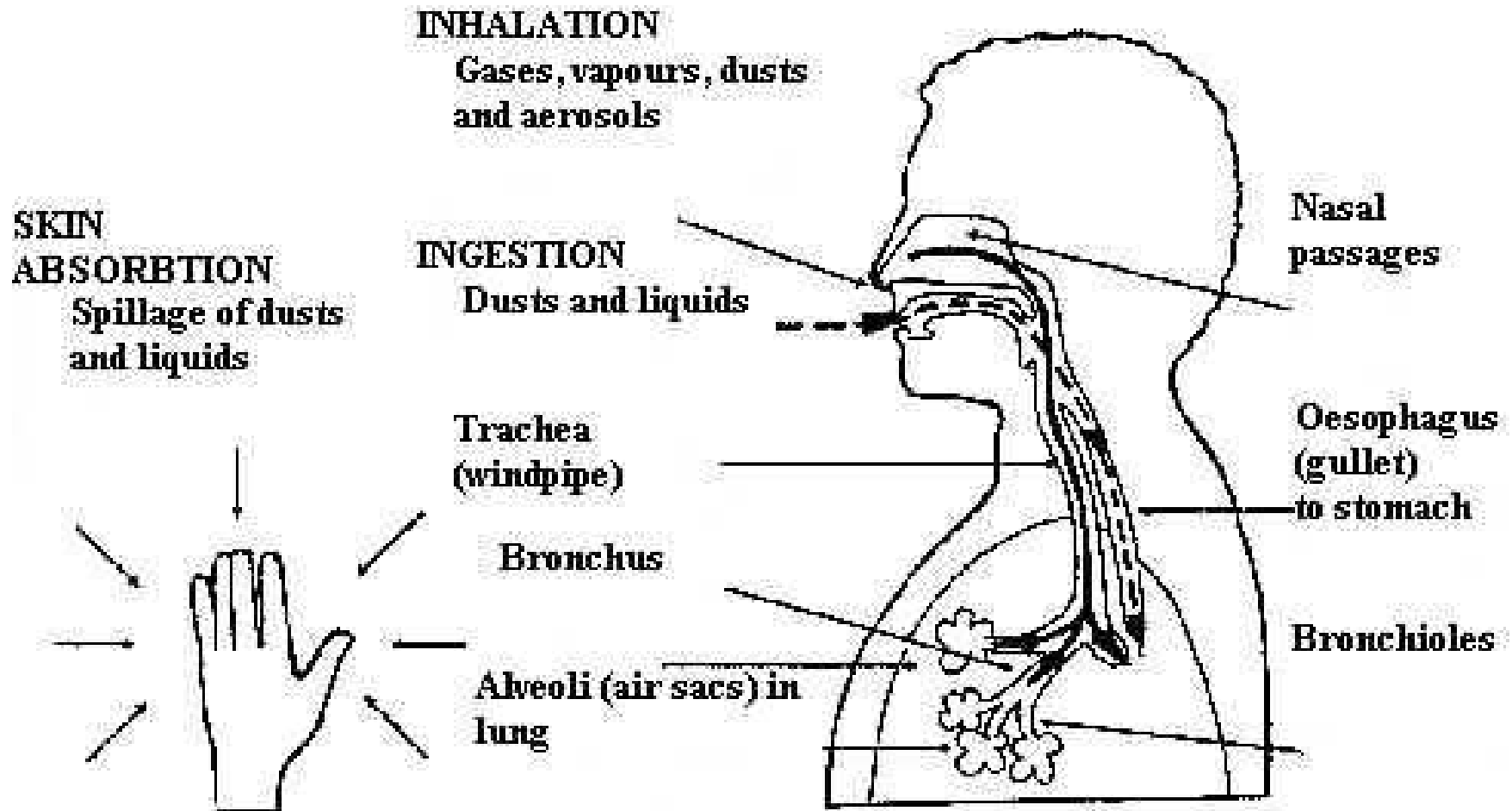
Chemicals Within the Office

- Cleaning and maintenance products
- Office products
- Office furnishings and upholstery
- Waste disposal practices

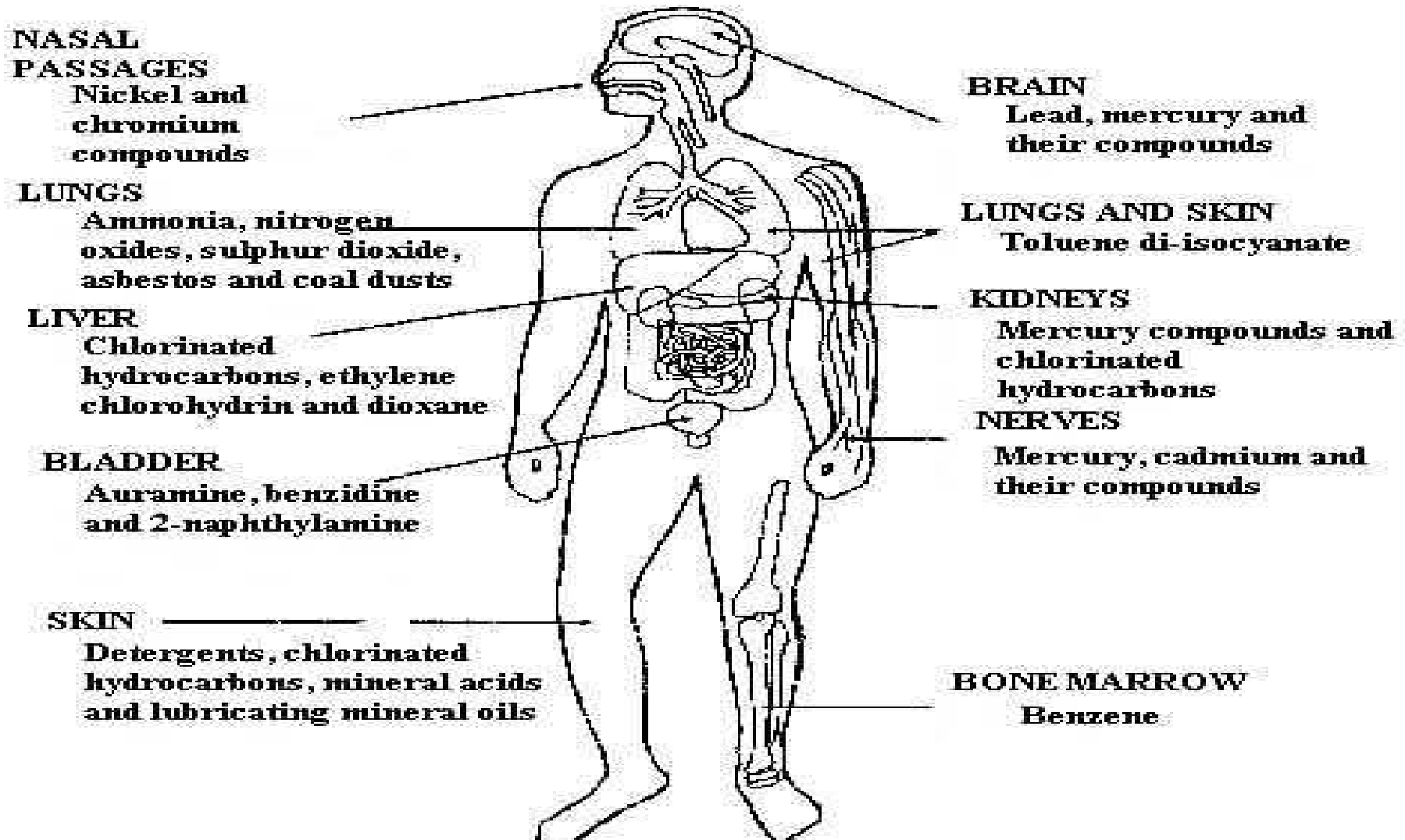
The Work Environment

- Other than the home it is the setting in which many people spend the largest amount of time
- Contributes to good health and economic achievements
- May expose many workers to health hazards:
 - Injuries
 - Respiratory and Cardiovascular diseases
 - Cancer
 - Musculoskeletal and Reproductive disorders
 - Mental and neurological illnesses
 - Eye damage and Hearing loss
 - Communicable diseases

ROUTES OF ENTRY/ HEALTH EFFECTS



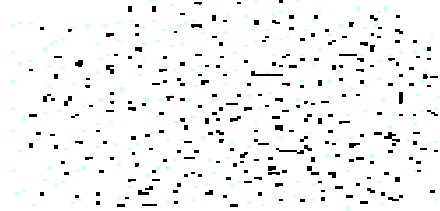
ROUTES OF ENTRY/ HEALTH EFFECTS



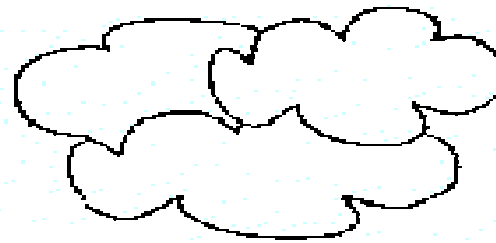
FORMS OF CHEMICALS FOUND IN THE WORKPLACE

Solids, Dusts, Liquids, Vapours, Gases

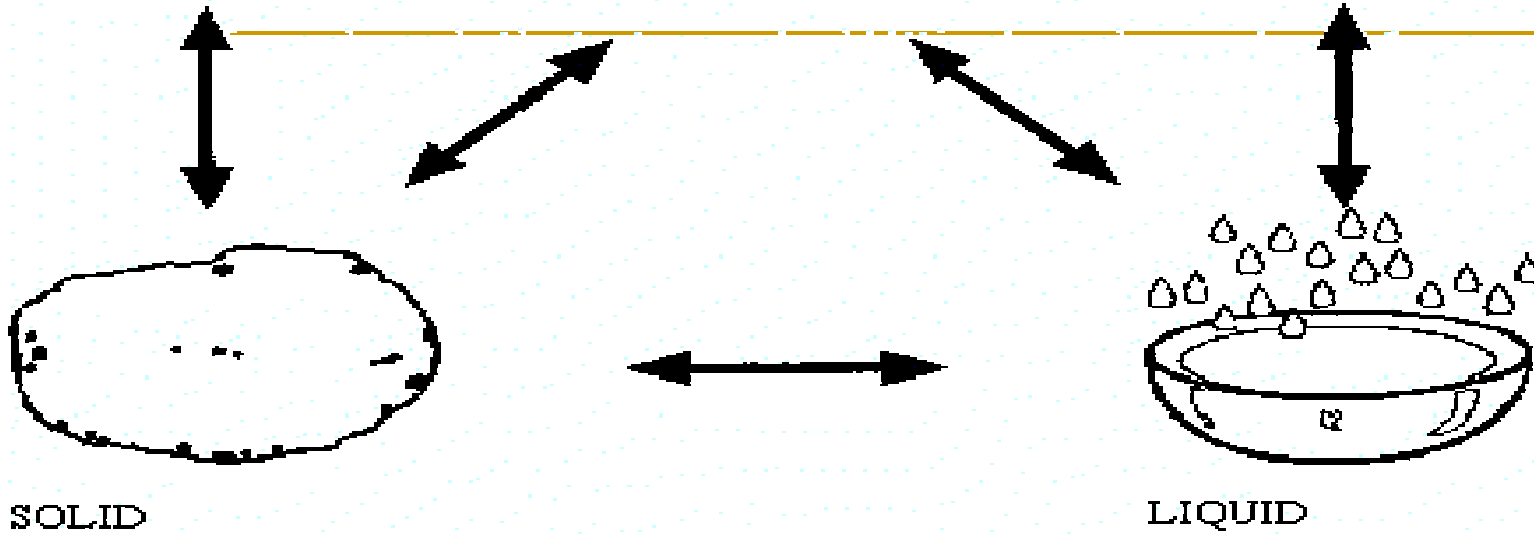
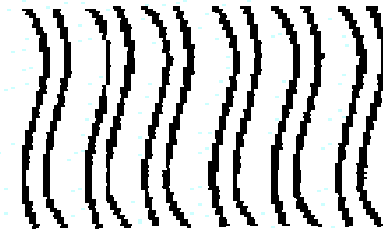
DUST



GAS



VAPOUR



SOLID

LIQUID

Office Products as Hazardous Material

- Office equipment and products such as photocopiers, laser printers, adhesives, inks and correction fluid, can pose a health risk to users and building occupants.
- Many office products may be harmful to the environment if not disposed of properly.

Office Products as Hazardous Material

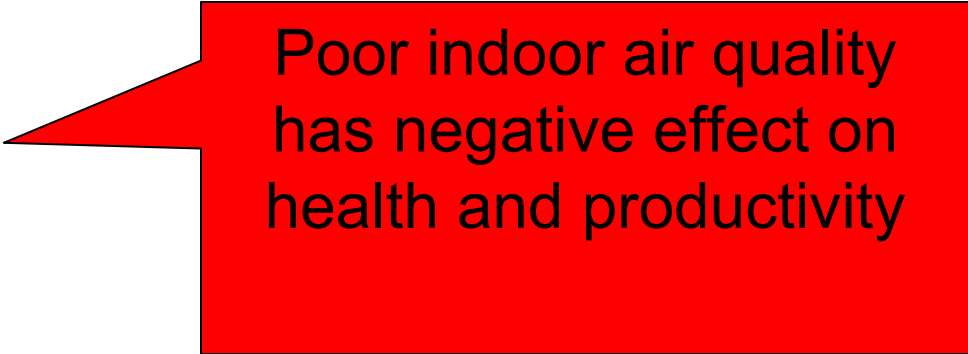
- Toner
- Light and Ultraviolet Light
- Ethylene Glycol and Acetone
- Asbestos
- Formaldehyde
- Trichloroethylene
- Ammonia/ Isopropyl Alcohol

Some Sources of Hazardous Chemicals

- Used oil
- Household hazardous waste
- Mercury lamps and devices
- Batteries
- Generator Hazardous waste

Indoor Air Quality - Definition

- The physical, chemical and biological characteristics of air within a habitable structure, often poor due to a lack of exchange with fresh oxygenated air from outdoors.



Poor indoor air quality has negative effect on health and productivity

Indicators of Poor Indoor Air Quality

- Malaise (depression)
- Stress
- Absenteeism
- Loss of productivity

Ergonomics - Definition

- Fitting work to people
- Process of designing or arranging workplaces, products and systems so that they fit the people who use them

Ergonomics - Importance

- Improper ergonomic conditions can result in musculoskeletal injuries and disorders:
 - Tendonitis
 - Carpal tunnel syndrome

Actions Towards Reducing Occupational Risks Involving Ergonomics

- User should be arm's length from the computer screen
- An adjustable table should be used to ensure proper monitor and keyboard height
- Attach document holder to computer screen
- Use headset where telephone use is frequent

Actions Towards Reducing Occupational Risks Involving Ergonomics

- Adjust lighting to ensure minimal glare in working area
- Workstations should be used and designed to reduce risk of injury
- Move from workstation to do other tasks at least every 5 minutes for each hour spent at the terminal