GHS

The Globally Harmonized System of Classification and Labeling of Chemicals

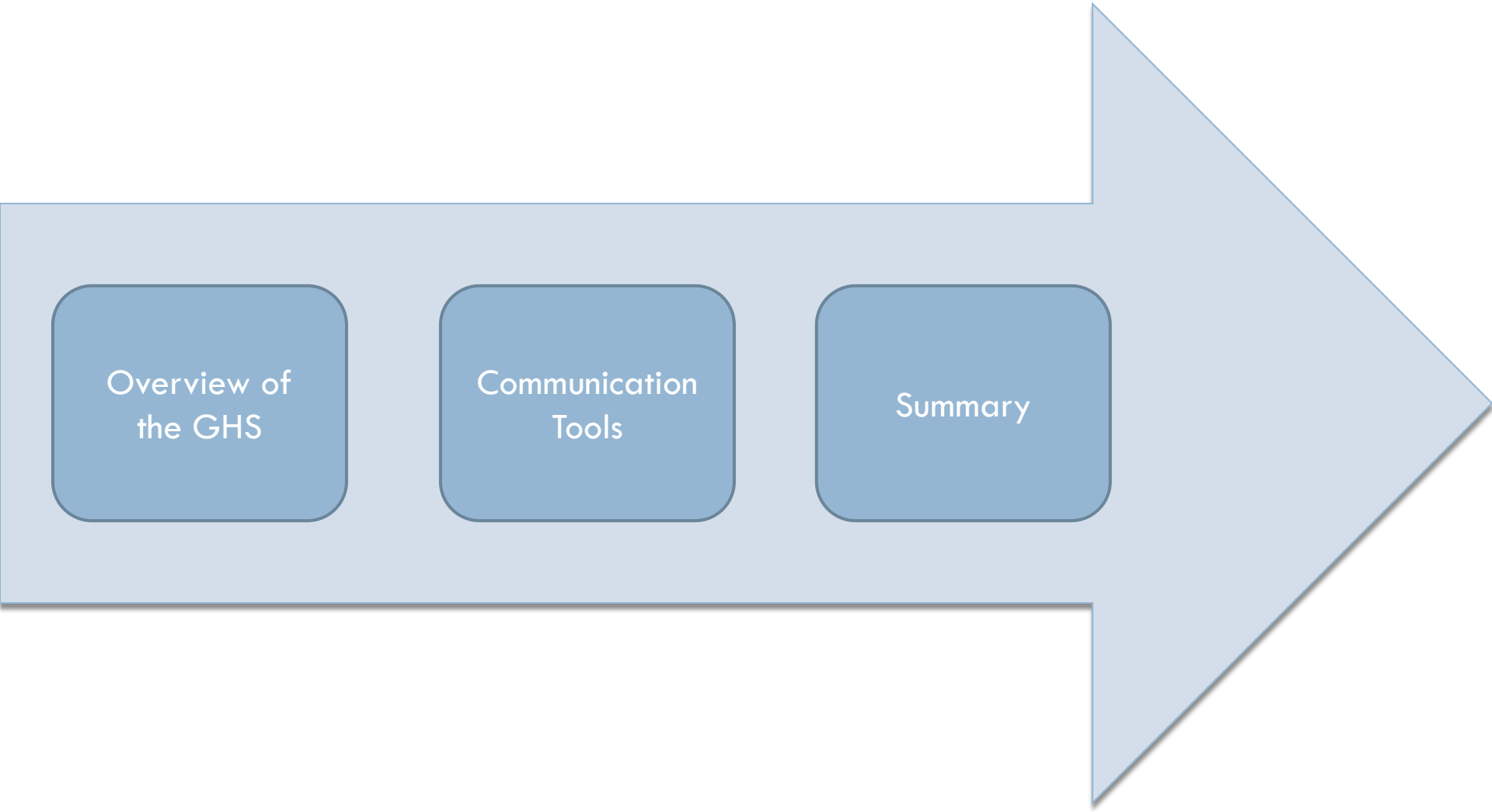
PRESENTATION

Presented by: Philip Pile
Environmental Protection Department

Purpose of Presentation

- Three main purposes:
  - Inform participants about the GHS
  - Highlight the benefits of the GHS to participants and to Barbados
  - To raise awareness about GHS communication tools
    - Labels
    - Safety Data Sheets (SDS)

Outline of Presentation



Overview of the GHS

What is the GHS?

- It is a very thorough method for:
  - determining the hazards of chemicals
  - determining the severity of those hazards
  - communicating information on chemical hazards

Why was the GHS developed?

Why was the GHS developed?

What are the benefits?

- For Government
  - lower costs to health care because of less chemical related incidents.
  - improved protection for workers and the public from hazard related to chemicals.
  - reduced costs of enforcement by avoiding duplication of effort in creating national systems.

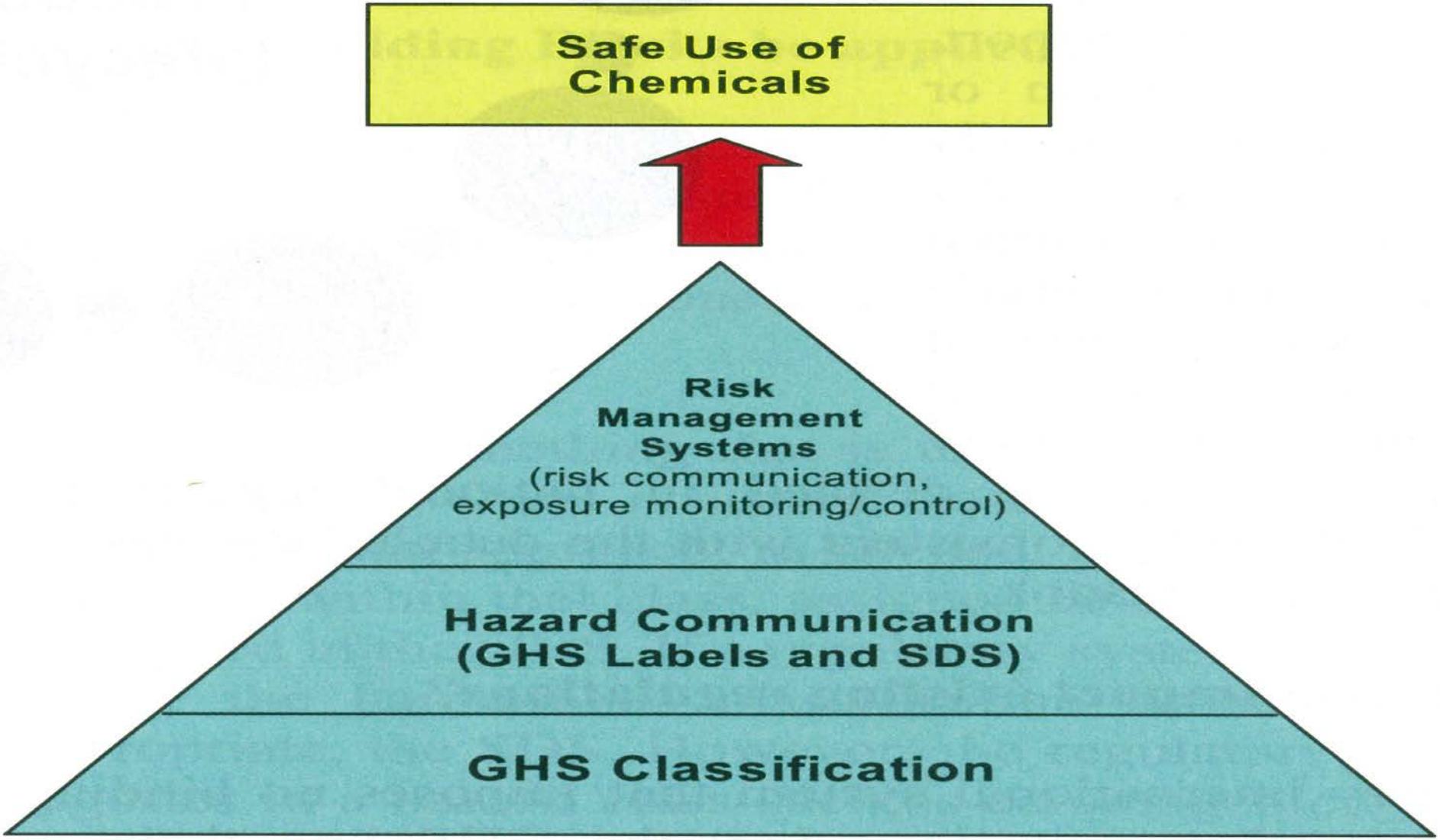
What are the benefits?

- For Companies
  - safer work environments.
  - reduced cost of compliance with hazard communication regulations.
  - improved corporate image and credibility.
  - compliance with the Safety and Health at Work Act.

What are the benefits?

- For the worker and the public
  - greater awareness of hazards, which could result in safer use of chemicals in the workplace and at home.

How is the GHS applied?



Communication Tools

- Main tools used by the GHS:
  - Labels
  - Safety Data Sheets (SDS)

DEGREASEALINE

DANGER

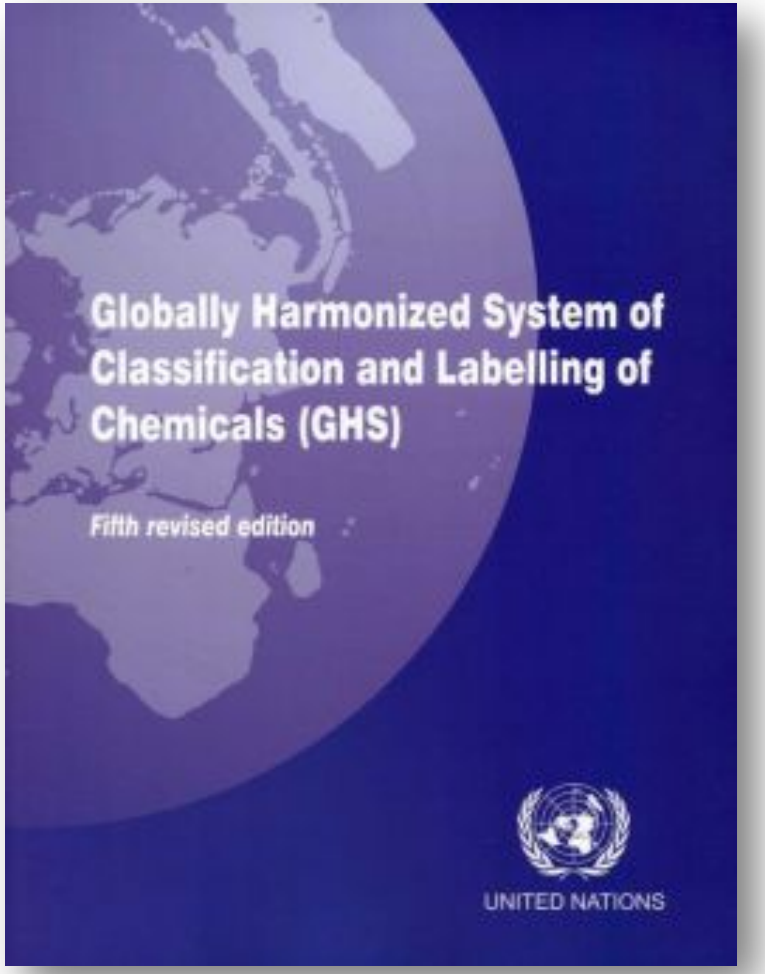
HAZARD STATEMENTS:
Highly flammable liquid and vapor.
May be harmful if swallowed and enters airways.

PRECAUTIONARY STATEMENTS:
Keep container tightly closed. Do not breathe vapors. Suspected of causing cancer by inhalation. Wear respiratory protection, gloves and coveralls. Store in a well ventilated place. Keep Cool. Keep away from heat/sparks/open flame. No smoking. Dispose of contents/container in accordance with local regulations. FIRST AID: If exposed seek immediate medical attention.

EMERGENCY: 1-800-234-5678
ABC Fine Chemicals, 1234 Over There St., Any Town
Tel: (123) 456-7890

Further Information

- United Nations (UN) publication of the GHS
- Fifth revised edition, 2013
- Outlines the provisions in four parts:
  - Introduction (scope, definitions, hazard communication)
  - Classification criteria for health hazards
  - Classification criteria for health hazards
  - Classification of environmental hazards



Activities

Activity #1 – Labels

- Working in groups of at most four people:
  1. List the pieces of information that you generally see on a chemical label.
  2. Identify three (3) pieces of information that you think should be on a chemical label but are not normally found on those labels.

- Time: 10 minutes

GHS Labels

- Generally, GHS labels contain 7 pieces of information:
  - Harmonized label elements:
    - Symbol/pictogram
    - Signal Word
    - Hazard statement(s)
  - Other core information to be provided:
    - Product identifier
    - Supplier information
    - Precautionary statement(s)
    - Supplemental information

The Basic Parts of A GHS-Compliant Label

1

n-Propyl Alcohol

UN No. 1274

CAS No. 71-23-8

2

DANGER

3

Highly flammable liquid and vapor. Causes serious eye damage.
May cause drowsiness and dizziness.

4

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing fumes/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present. Continue rinsing.

6

Fill Weight: 18.65 lbs.
Gross Weight: 20 lbs.
Expiration Date: 6/21/2020

Lot Number: B56754434
Fill Date: 6/21/2013

See SDS for further information.

5

Acme Chemical Company • 711 Roadrunner St. • Chicago, IL 60601 USA • www.acmechem.com • 123-444-5567

1. **Product Identifier** - Should match the product identifier on the Safety Data Sheet.
2. **Signal Word** - Either use "Danger" (severe) or "Warning" (less severe)
3. **Hazard Statements** - A phrase assigned to a hazard class that describes the nature of the product's hazards
4. **Precautionary Statements** - Describes recommended measures to minimize or prevent adverse effects resulting from exposure.
5. **Supplier Identification** - The name, address and telephone number of the manufacturer or supplier.
6. **Pictograms** - Graphical symbols intended to convey specific hazard information visually.

Sample label courtesy of Weber Packaging Solutions • www.weberpackaging.com

Activity #2 - Pictograms

- Working in pairs or individually:
  1. Select the pictogram which best corresponds with the question asked.
  2. Records its number in the box provided.
  3. Use each pictogram only once.
- Time: 5 minutes

Hazard Communications Pictograms

Health Hazard

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Flame

- Flammables
- Pyrophorics
- Emits Flammable Gas
- Self-Reactive
- Organic Peroxides

Exclamation Point

- Irritant (skin & eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant

Gas Cylinder

- Gases Under Pressure

Corrosion

- Skin Corrosion / Burns
- Eye Damage
- Corrosive to Metals

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Flame Over Circle

- Oxidizers

Environmental

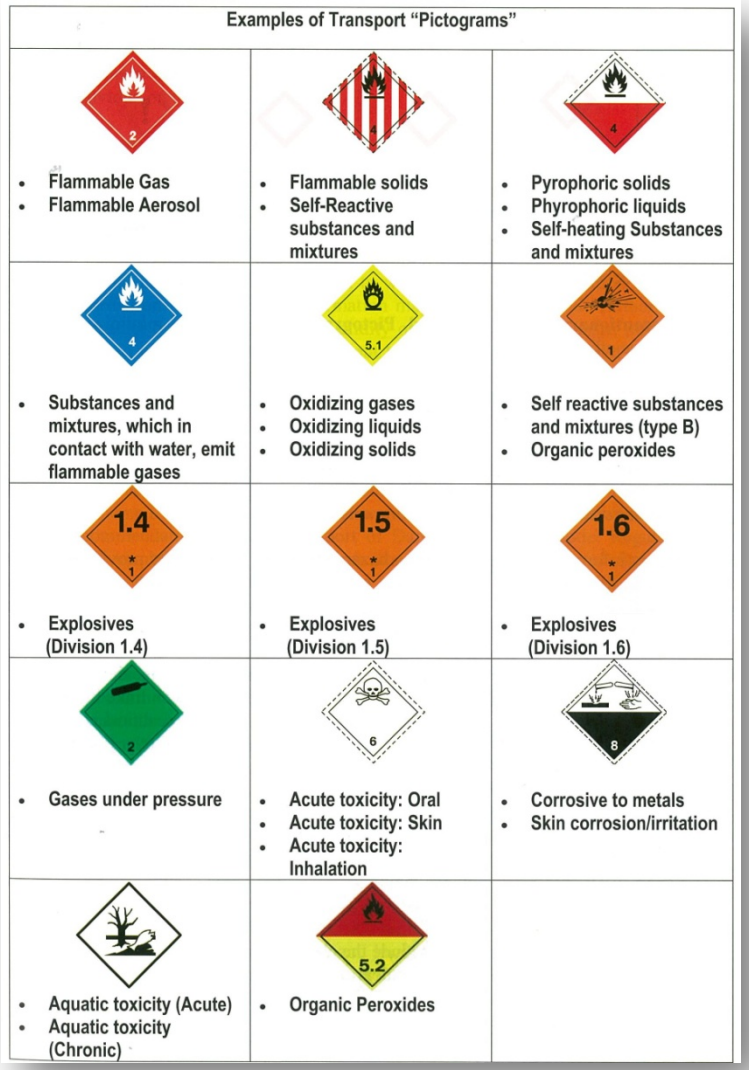
- Aquatic Toxicity

Skull & Crossbones

- Acute Toxicity (fatal or toxic)

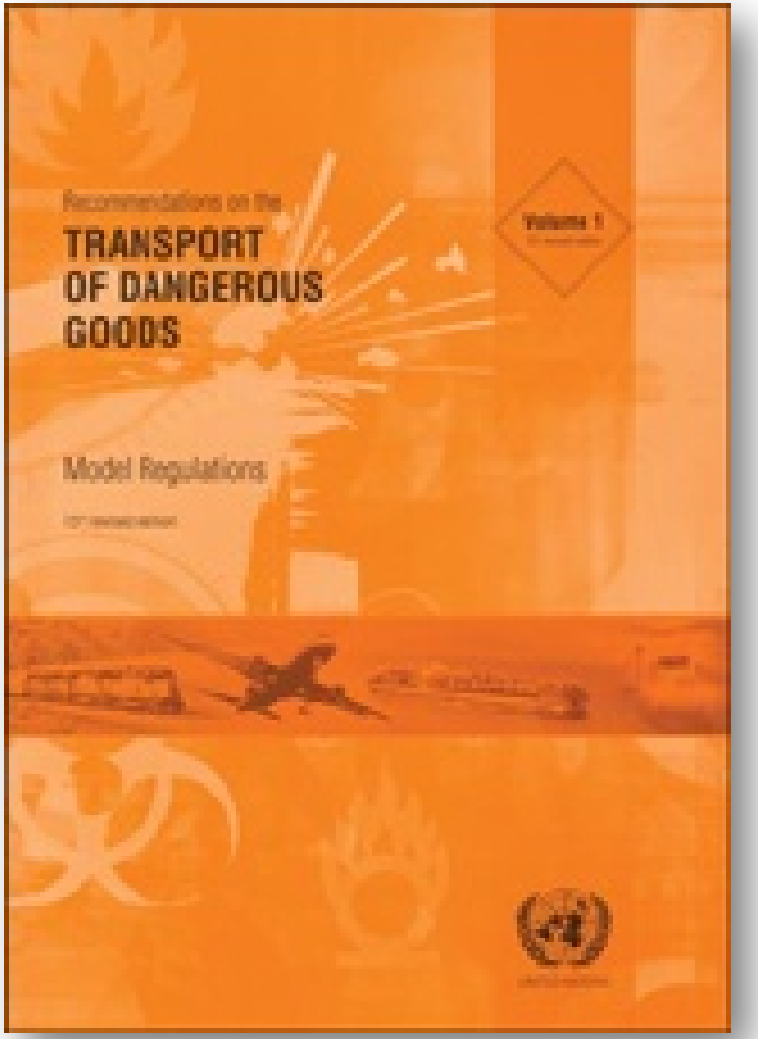
GHS Pictograms – Transport Sector

- Transport sector uses pictograms in the UN Recommendation on the Transport of Dangerous Goods, Model Regulation.



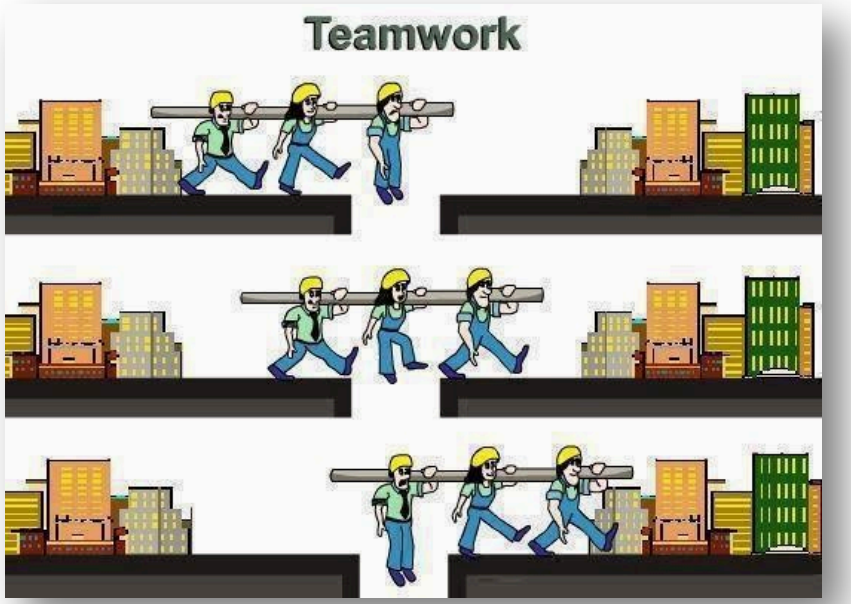
Orange Book

- UN Recommendation on the Transport of Dangerous Goods, Model Regulation.
- 16th revised edition (2009)



Activity #3 – Safety Data Sheets

- In groups of four, identify the differences of the SDS to:
  - those that you currently use; or
  - have worked with in the past.
- Time: 5 minutes



GHS Safety Data Sheets

- A SDS provides:
  - comprehensive information about a chemical
  - information that allows employers and users to:
    - protect the environment
    - protect workers
  - valuable information to:
    - people involved with the transport of dangerous goods
    - emergency responders
    - poison centres
    - consumers
    - people involved with professional use of pesticides

GHS Safety Data Sheets

1. Identification
2. Hazard identification
3. Composition/information on ingredients
4. First aid measures
5. Fire fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal information
14. Transport information
15. Regulatory information
16. Other information

Summary

Review

- The GHS is a tool:
  - To enhance the protection of human health and the environment by ensuring that chemical hazards are communicated in a simple and consistent manner.
- Benefits of the GHS include:
  - protection of the environment
  - reduction in health care costs
  - reduction in the number of work related accidents
  - promotion of safer work environments

Review

- To communicate hazards, the GHS uses:
  - Labels
  - Safety Data Sheets
- Label should contain at least four components:
  - Pictograms
  - Signal Word
  - Hazard Statements
  - Product Identifier
- SDS should contain at least 16 categories of information

Remember to…

1.

2.

Time for questions

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