

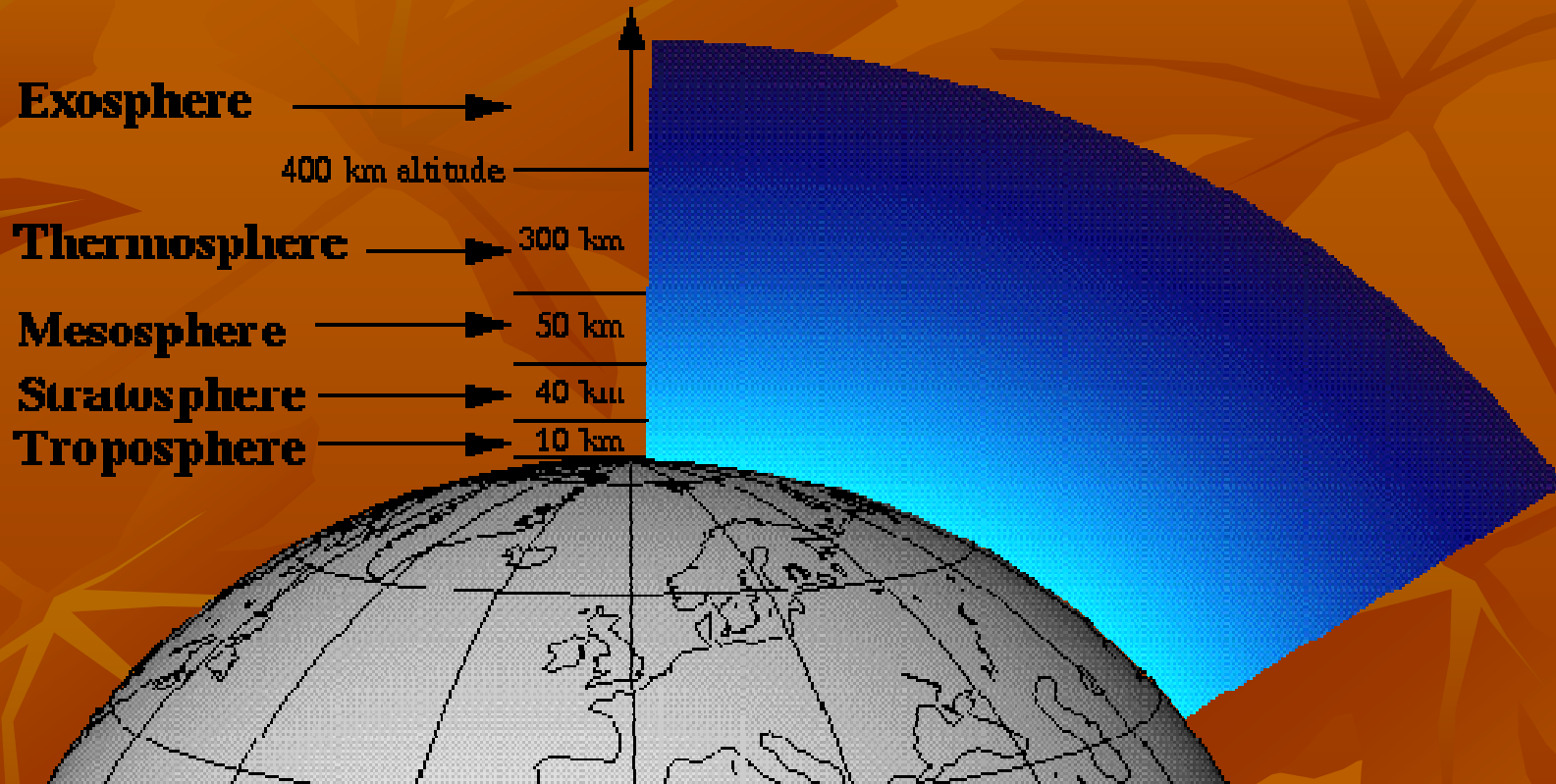
THE OZONE LAYER AND JAMAICA'S ROLE IN PROTECTING IT



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NYS TRAINING – 27 January 2009

The Earth's Atmosphere

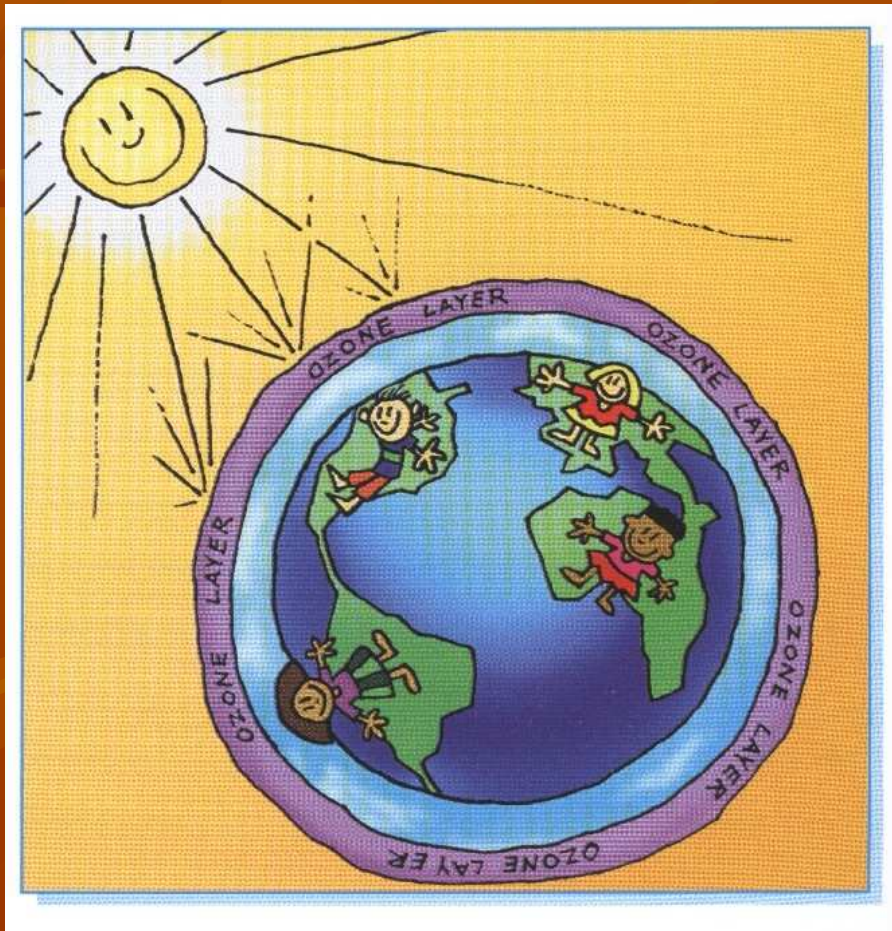


Centre for Atmospheric Science
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THE OZONE LAYER

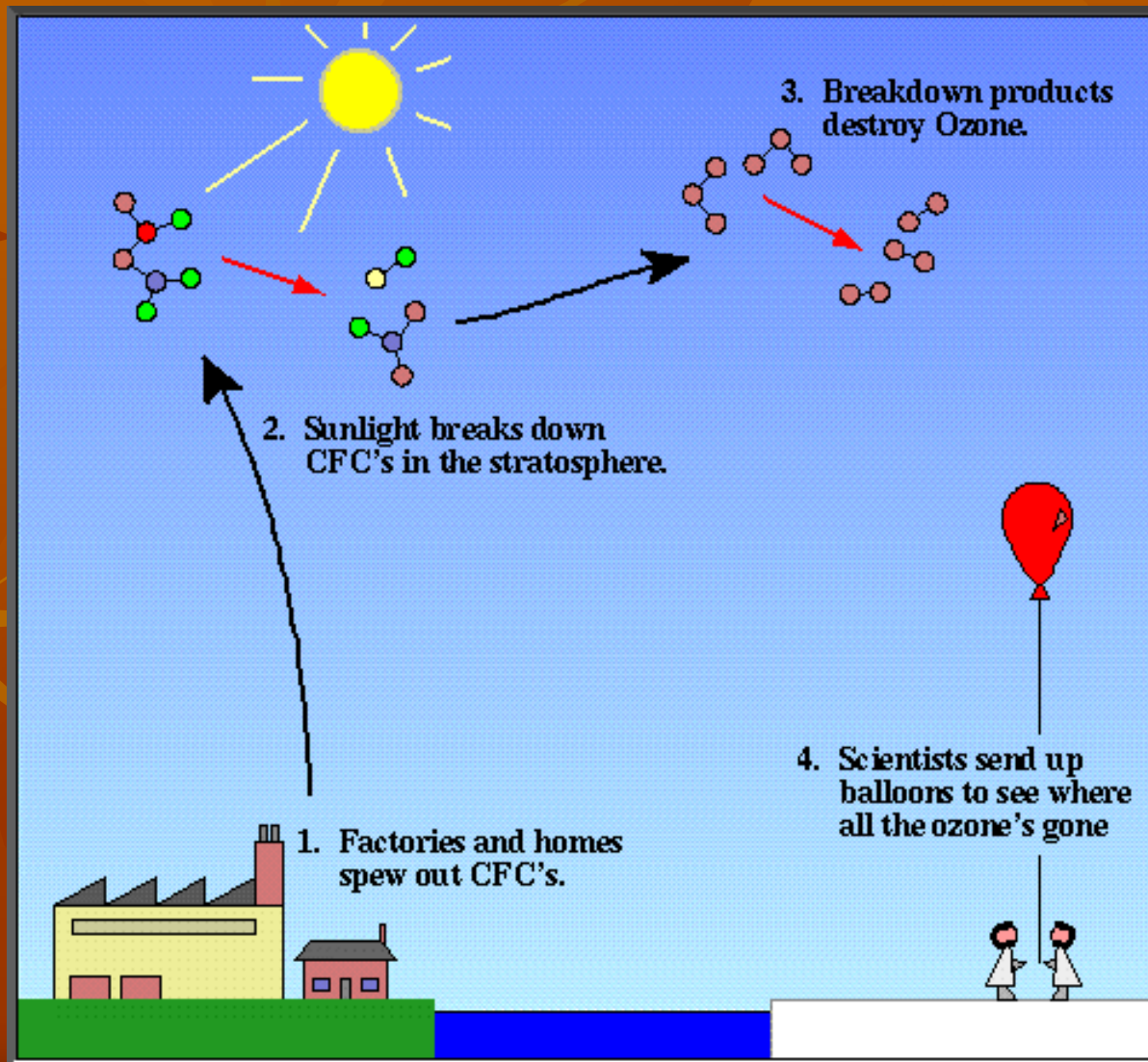
- Ozone has three oxygen atoms
- Formed naturally in the upper levels of the earth's atmosphere (stratosphere) by UV radiation from the sun
- The radiation breaks down oxygen molecules releasing free atoms which bond with other oxygen molecules to form ozone
- The ozone layer is about 10 to 50 km above the earth's surface

IMPORTANCE OF THE OZONE LAYER

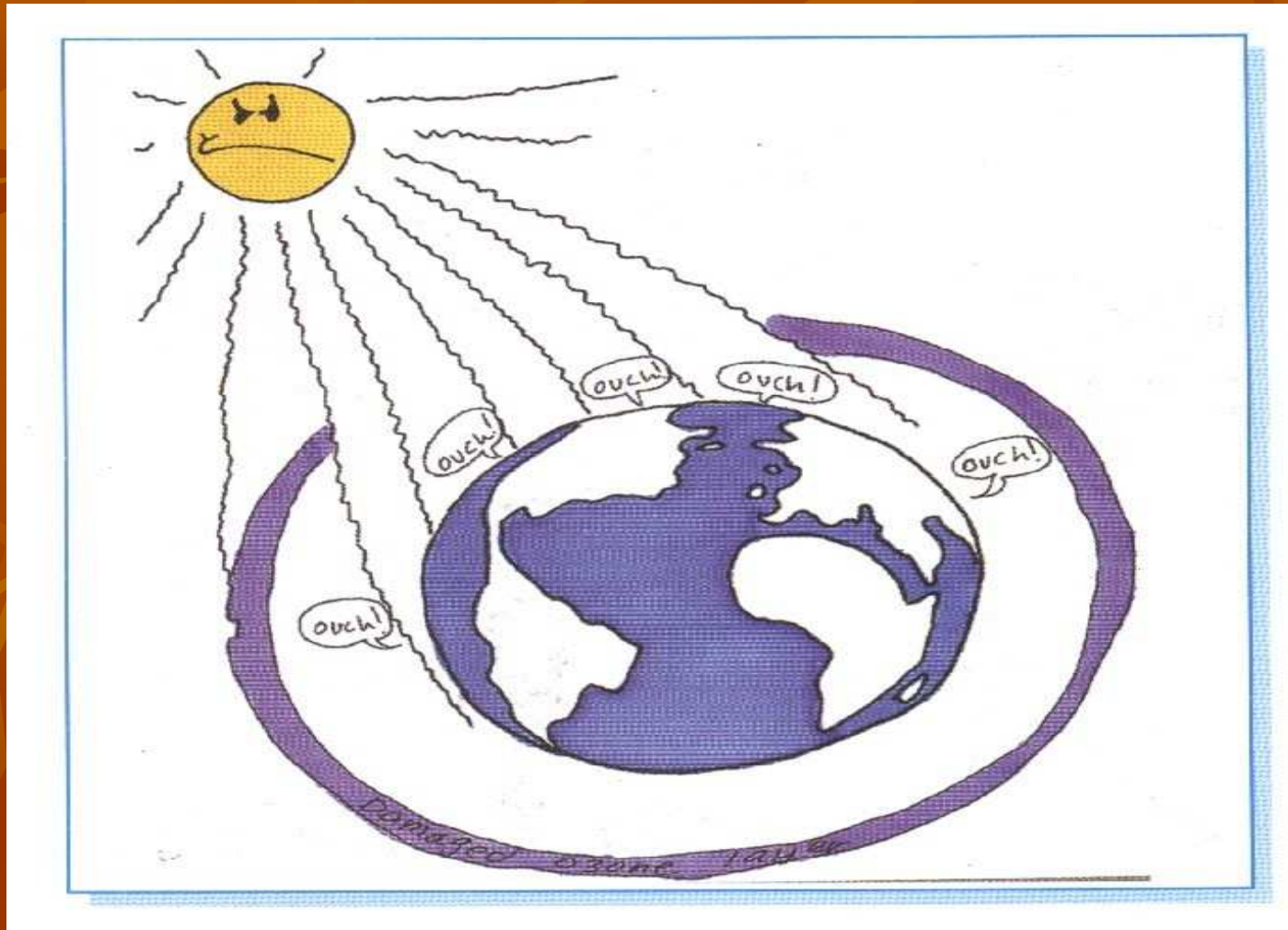


- Absorbs sun's harmful radiation (UV-B)
- Shields the earth from the harmful effects of UV- B
- The ozone layer – 'the earth's sunscreen' or 'the earth's umbrella'

OZONE LAYER DEPLETION



OZONE LAYER DEPLETION cont'd



OZONE DEPLETING SUBSTANCES

- ✎ Chlorofluorocarbons (CFCs) – e.g. R11, R12 (phased out January 2006)
 - R11 – refrigerant in chillers
 - R12 - refrigerant in refrigerators, car air conditioning units
propellants in aerosol cans
- ✎ Carbon tetrachloride; methyl chloroform (phased out 2007 with exemption)
 - Solvents
- ✎ Halons (bromofluorocarbons or BFCs) (phased out 2002 with exemption)
 - fire extinguishers
- ✎ Methyl bromide (to be phased out in 2009)
 - Pesticide (fumigant)
- ✎ Hydrochlorofluorocarbons e.g. HCFCs (freeze in 2013; phase out in 2030)
 - Refrigerants (substitutes for CFCs)
 - Lower ozone depleting potential than CFCs

THE OZONE HOLE

Hole in the Ozone Layer?



RESULTS OF OZONE LAYER DEPLETION....UV-B EXPOSURE



RESULTS OF OZONE LAYER DEPLETION....UV-B EXPOSURE

- ☹ Increased risk of skin cancers
- ☹ Increased risk of cataracts
- ☹ Decreased resistance to disease
- ☹ Lower crop yields
- ☹ Affects phytoplankton, zooplankton
- ☹ Increased degradation of plastics and paints

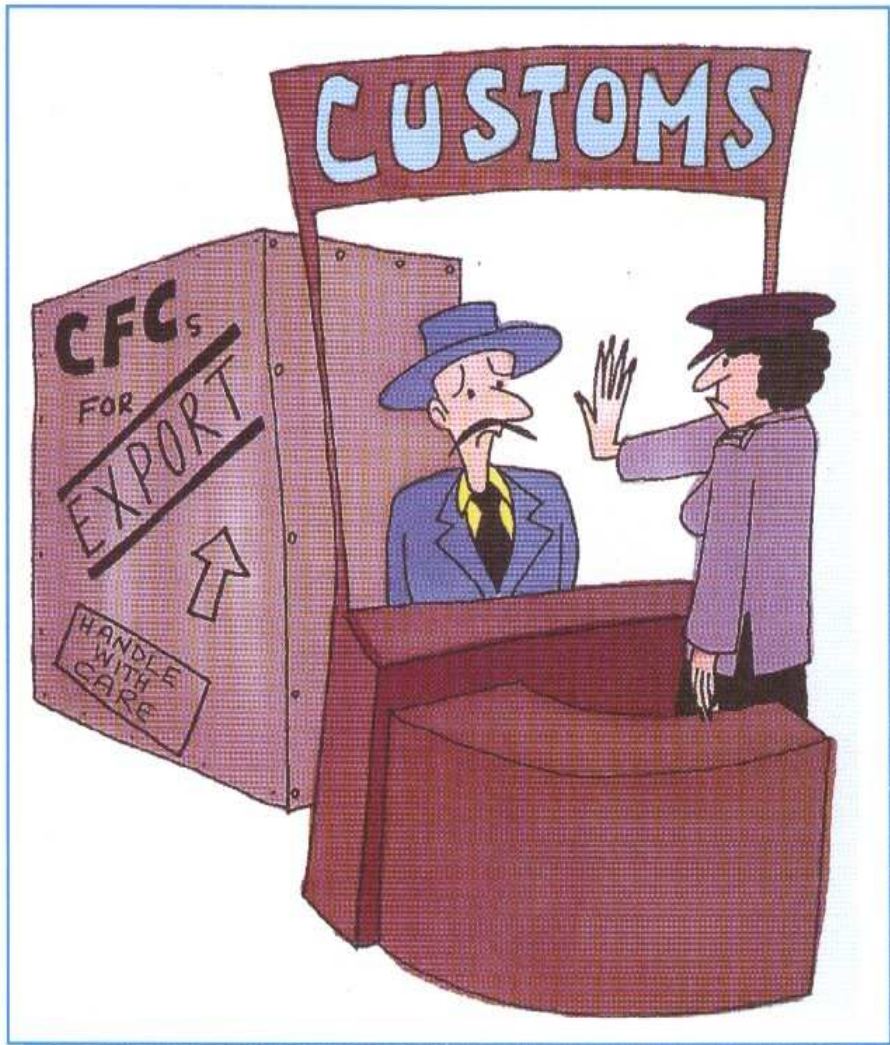
THE RESPONSE TO OZONE LAYER DEPLETION

- ☺ Vienna Convention for the Protection of the Ozone Layer
 - 👍 Entered into force in 1985
 - 👍 Agreement to take appropriate measures to protect the ozone layer – research, monitoring, exchange of information
- ☺ The Montreal Protocol on Substances that Deplete the Ozone Layer
 - 👍 Entered into force in 1989
 - 👍 Controls on production, consumption and use of ozone depleting substances (ODS)
- ☺ United Nations declared September 16th International Ozone Day

JAMAICA'S ROLE

- 1993 – Party to Montreal Protocol
- Ratified all amendments; adjustments binding on all Parties
- Establishment of the National Ozone Unit and Ozone Officer in 1997
- Implementing projects geared towards phase out of ODS

JAMAICA'S ROLE cont'd



- OUR PARTNERS:
 - ❖ Jamaica Customs
 - ❖ STATIN
 - ❖ Private sector (retailers of air conditioning units and refrigeration equipment, UWI,)
 - ❖ Public sector (Min of Health, Office of the Prime Minister, Min of Finance)

JAMAICA'S ROLE cont'd

- Ministerial Orders under the Trade Act
- Public awareness activities – environmental expositions, agricultural shows, media ads
- Celebrating International Ozone Day
- Participation in regional and international meetings

PROTECT YOURSELF FROM THE SUN....HOW?

- Limit exposure during midday
- Wear protective clothing
- Wear broad rimmed hat to protect eyes, face, neck
- Protect eyes with wrap around/side panel sunglasses
- Use sunscreen with SPF 15 and above
- Protect young children



OZZY OZONE
DEFENDER OF OUR PLANET