

## Science Notes

### Lesson 1 – “Where on earth do organisms live?”

#### I. The Biosphere

a. Definition: The part of the earth that can support living things.

b. Example Environments:

i. Deserts

ii. Oceans

iii. Fields

iv. Beaches

v. Backyards

#### II. Organisms in the Biosphere

a. Scientists have discovered and named nearly two million different organisms in the Earth’s biosphere, with many yet to be discovered.

b. Difficult areas for scientists to study:

i. Deep oceans

ii. Dense rain forests

iii. Vast deserts

c. Each organism in the biosphere interacts with other organisms in the biosphere (i.e. humans using fuel in their vehicles).

### III. Variety Among Living Things

- a. A class list of organisms would be very small compared to a list of all known organisms.
- b. Organisms have many different body plans and structures, allowing them to live in almost every place on Earth.
- c. All living things:
  - i. Are made of cells.
  - ii. Require a source of energy.
  - iii. Reproduce
- d. Adaptation – a characteristic that enables an organism to survive and reproduce in its environment.
  - i. Example – Thick fleshy stems of a cactus allow it to store water.

### IV. Groups of Organisms

- a. Some groups of organisms may share many characteristics and may be members of the same species.
- b. Species – a group of very similar organisms whose members can mate with one another and produce offspring that are able to produce offspring.

- c. Members of the same species can be different in many ways including:
- i. Size
  - ii. Color
  - iii. Shape
- d. Just because an organism LOOKS similar they MAY be a different species.