**Environmental Science: Transition Tasks**



**Task 1: Research**

Environmental science is a broad subject and will probably have an interest in a specific area, which you may or may not have studied at school. Your task is to produce an A4 or A3 (maximum) sheet of any area of Environmental science you find interesting. This can be done in any way (e.g. poster, leaflet, extended piece of writing) but must have images, scientific information at an AS-Level standard, be well presented and an original piece of your own work. A paper copy of your task should be available to be handed in during your first Beverley High School lesson.

**Task 2: Knowledge of key content**

Use appropriate research sources to answer these questions. You should focus on ensuring you understand what you are writing rather than copying information from sources of a degree standard. This task should be handed in during your first lesson.

**The Atmosphere**

1. Describe the composition of gases that make up the atmosphere.
2. Explain why atmospheric carbon dioxide levels fluctuate through the year (lower in the Summer, higher in the Winter) in the northern hemisphere.
3. Outline the processes involved in the natural greenhouse effect.
4. Name the major anthropogenic (man-made) greenhouse gases and provide sources of each.
5. What does the term ‘carbon dioxide equivalent’ mean?
6. Describe some likely consequences of Global Climate Change (GCC).
7. Define the term ‘albedo’ and describe the relationship between this term, climate change and ice sheets.
8. Describe how the ozone layer helps support complex life on Earth.
9. Explain what the terms negative-feedback and positive-feedback mean in relation to mechanisms involved in GCC. You should provide an example of both feedback mechanisms in your explanation.

**The Hydrosphere**

1. What is an aquifer?
2. Name some uses of water in the following areas:
   1. Domestic uses
   2. Industrial uses
   3. Agricultural uses
3. Define the term ‘turbidity’.
4. What does ‘potable’ mean in relation to water?
5. Explain (with an example of each), the difference between ‘abstractive’ and ‘non-abstractive’ uses of water.
6. Outline the steps needed to purify river water so that its suitable for drinking. You should explain the importance of each step.
7. Explain the difference between ‘porosity’ and ‘permeability’ in rocks.
8. Describe some of the consequences of aquifer overuse.

**The Lithosphere**

1. Outline the igneous, sedimentary and metamorphic processes that have led to the formation of mineral resources in rocks.
2. What is an ‘ore’?
3. Define the term ‘cut-off grade’.
4. Outline the environmental impacts of mining for mineral resources.
5. Draw a diagram of processes involved in the natural carbon cycle. Annotate this diagram with the impact of human activities.
6. Draw a diagram of processes involved in the natural nitrogen cycle. Annotate this diagram with the impact of human activities.
7. Describe how the particle size of soil can affect the following properties:
   1. Drainage
   2. Water content
   3. Aeration
   4. Nutrient levels
   5. Root penetration