**WATER QUALITY**

**What is water quality?**

The physical, biological and chemical characteristics of water.

**Why measure water quality?**

* Drinking water quality/human contact
* Health of ecosystems
* Detect long term trends/anomalies
* Understand processes

**What determines water quality?**

* Interactions between soils, vegetation and geology
* Rainfall and atmospheric inputs (e.g. acid rain)
* Anthropogenic sources (e.g. agricultural fertilisers, sewage effluent)
* Hydrology

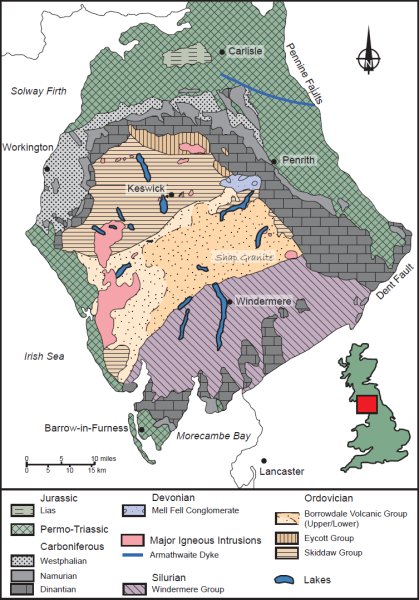
**What can we measure?**

* pH
* Conductivity
* Dissolved oxygen
* Colour
* Biological indicators
* Sediment volume
* Other more complex parameters, such as toxic metals

**How can we measure it?**

* Probes or sensors in the field
* More advanced analytical equipment in the lab.











**Mayfly Nymph**



**Stonefly Nymph**



**Dragonfly Nymph**

**CLEAN**

**COMMON AQUATIC INVERTEBRATES**



**Caddisfly**



**Water beetle**



**Leech**



**Hoglouse**



**Bloodworm**



**Worms**

**POLLUTED**

**RESULTS**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Mayfly** | **Stonefly** | **Dragonfly** | **Caddisfly** | **Water Beetle** | **Leech** | **Hoglouse** | **Bloodworm** | **Worms** |
| **Site 1** |  |  |  |  |  |  |  |  |  |
| ***Total*** |  |  |  |  |  |  |  |  |  |
| **Site 2** |  |  |  |  |  |  |  |  |  |
| ***Total*** |  |  |  |  |  |  |  |  |  |

**Questions**

1. Which is the most common invertebrate?

2. Is there a difference between the two sites?

3. Is water quality affected by the Field Centre?

4. How could you improve the sampling strategy?