 **Mechanisms in Giant Machines**

**Introduction**

* Even the largest, most complicated machines are formed from simple machines organized into mechanisms;
* Each mechanism has a function, and they all work to reduce strain on parts and lessen the amount of fuel required.

**Giant Draglines**

* Dragline excavators are some of the largest machines made;
* One common use is in open-pit coal mines, where they are used to remove the layers of soil and rock that cover the coal;
* Dragline works by dropping a bucket on the ground from the tip of its crane;
* A winch is then used to drag the bucket along the ground;
* The earth that has been pulled in is then piled up so that trucks can remove it at a later time.

**Giant Power Shovels**

* Power shovels are used to pick up broken-up earth or rock and load it into trucks;
* They may be used to help remove the dirt excavated by a dragline, or they may be used at large construction sites where earth is being removed for a foundation.

**Conclusion**

* Giant machinery is increasingly being computerized so that the equipment operates smoothly within its designed limits;
* This can also help reduce and cut costs.