**Energy pyramids**

**Objective**: Analyze how energy flows through an ecosystem.

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|  | **Types of Consumers****Herbivores** - eat only plants**Carnivores** - eat only animals**Omnivores** - eat plants & animals**Scavengers** - eat dead animals**Energy Pyramids**The trophic levels are:* **Producer** – performs photosynthesis.  Ex: plant
* **first-order consumer** – eats producers.  Ex: grasshopper
* **second-order** **consumer** – eats first-order consumers.  Ex: bird
* **third-order consumer** – eats second-order consumers.  Ex: hawk

This can be modeled through an **energy pyramid,** in which the producers provide the broad base that supports the other interactions in the system.  https://lh6.googleusercontent.com/wE_QTHsBGK_0K9I9YV9XUWyuCh_yMX-RXGbZ-9AksYI5z_gEkZkK0wblzwQivfUiy4idWAxG0lPA5xnHo7cOURYdedtDp_IoHXDRANSfr0OSEJAUH1Q1yV3G5gThe amount of energy available to each successive **trophic level** decreases by 10%  https://lh6.googleusercontent.com/2sfNYSJ4_wQ6KfOs3I4gUTSwjGEGzCQ8qLV9Y8IAoR71Q4kCuv89tHJo4mdYTZCh2xA9YAHRK5GrBlVA0c5qlCVQMZLPMgmuG8rwzsKXNoIdP62sFJrH_CagFQPopulation size decreases as the amount of energy available to the trophic level decreases. An organism’s **niche** is the role it plays in an ecosystem. |

**Summary:** *Give a food chain and its corresponding energy pyramid.  Which population would have the most available energy?  Which population would have the greatest population size?*

