**Keystone Species Notes**

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| **Screen shot 2014-03-16 at 1.44.39 PM.png** | **What is a Keystone?*** The term “keystone” derives from architecture.
* The keystone in an arch is the stone at the top of the **arch**, which **holds** the rest of the stones in **place** and allows the arch to bear weight.

*Q: What would happen if you removed the keystone?* |
|  | **Keystone Species Definition:** 1) A keystone species is a species whose impact on its community or ecosystem are larger and **greater** than would be expected from its relative **abundance** or total **biomass** in the environment.2) Keystone species play the same role in many ecological communities by maintaining the **structure** and **integrity** of the community. |
| **food web.jpg** | **Keystone Species: Sea Otter**Food Web Overview:1.Sea Otters eat urchins 2.Urchins eat KelpQ: What happens when Sea Otters Decline?Keystone Engineers |
| **Types of Keystone Species** 1. **Predator**: Control populations of Prey
	1. **EX**:
2. **Prey**: Provide important food source
	1. **EX**:
3. **Modifier/Engineer:** Change the environment around them.
	1. **EX**:
4. **Mutualist:** Mutually beneficial interactions – AKA link species
	1. **EX**:
5. **Host:**  Provide home and protection for a disproportionate number of species.
	1. **EX**:
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|  | **The prairie dog serves as a keystone engineer.** * By digging burrows, the prairie dog creates homes for other animals, including burrowing owls, rabbits, snakes, and insects.
* In addition, by churning the soil:
	+ Mix **nutrients**
	+ Allow **water** to penetrate **deeper**
	+ Help the prairie sustain more **plant** life
	+ Increasing the overall **primary productivity** of the community.
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| **Q: What 2 roles do prairie dogs perform as keystone engineers?**  |
| **Q: How are prairie dogs like upwelling?** |
|  | **Indicator Species** * A species whose presence, absence, or relative well-being in a given environment is **indicative of the health of its ecosystem** as a whole.
* **Basically**: *A Species that tells people what is going on in an ecosystem*
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| Overview of Keystone Species |