

## Concepts/Topics

- Biomes - terrestrial and aquatic, temperature/precipitation, other factors (fire, soil, grazing, humans)
- Population growth - exponential vs. logistic (r vs. K), carrying capacity, survivorship curves
- Population interactions - competition, niche, competition exclusion principle (paramecium experiment)
- Population Interactions - symbiosis: parasitism/predation, commensalism, mutualism, amensalism
- Predator/prey interactions (population graphs)
- Food chains, food webs, keystone species
- Behavior: camouflage, mimicry, altruism
- Trophic levels, ecopyramids (energy/mass/etc.)
- Invasive species

## Readings

*Principles of Life* (2013), Chpt. 40-44

## Homework/Activities

- No homework/activities at this time

Due: \_\_\_\_\_

## Helpful Web Links

*no web links at this time*

## Videos/Tutorials

Ecology Overview (BrightStorm)

[www.youtube.com/watch?v=OlyrXuwU7-M](http://www.youtube.com/watch?v=OlyrXuwU7-M)

### Ecosystems:

Ecosystems (Bozeman)

[www.youtube.com/watch?v=Ot\\_KmOTYfRA](http://www.youtube.com/watch?v=Ot_KmOTYfRA)

Ecology (Crash Course)

[www.youtube.com/watch?v=izRvPaAWgyw](http://www.youtube.com/watch?v=izRvPaAWgyw)

### Populations:

Population Ecology (Bozeman)

[www.youtube.com/watch?v=PQ-CQ3CQE3g](http://www.youtube.com/watch?v=PQ-CQ3CQE3g)

### Communities / Population Interactions:

Biology Community (BrightStorm)

[www.youtube.com/watch?v=OePvikPQJz8](http://www.youtube.com/watch?v=OePvikPQJz8)

Communities (Bozeman)

[www.youtube.com/watch?v=pOp-qLLTMso](http://www.youtube.com/watch?v=pOp-qLLTMso)

Symbiosis (BrightStorm)

[www.youtube.com/watch?v=jSkqBe4HclA](http://www.youtube.com/watch?v=jSkqBe4HclA)

Populations (Bozeman)

[www.youtube.com/watch?v=KFViSog6ZJw](http://www.youtube.com/watch?v=KFViSog6ZJw)

Competition (BrightStorm)

[www.youtube.com/watch?v=lvsqc1fqAFg](http://www.youtube.com/watch?v=lvsqc1fqAFg)

Competition (Crash Course)

[www.youtube.com/watch?v=GxE1SSqbSn4](http://www.youtube.com/watch?v=GxE1SSqbSn4)

Predation (Crash Course)

[www.youtube.com/watch?v=mFDiISqGB7M](http://www.youtube.com/watch?v=mFDiISqGB7M)

Predation (BrightStorm)

[www.youtube.com/watch?v=rJlImugMkw](http://www.youtube.com/watch?v=rJlImugMkw)

Food Chain (BrightStorm)

[www.youtube.com/watch?v=h3RLe2DHeeM](http://www.youtube.com/watch?v=h3RLe2DHeeM)

Food Webs (BrightStorm)

[www.youtube.com/watch?v=VxAVhB8H-os](http://www.youtube.com/watch?v=VxAVhB8H-os)

Keystone Species (BrightStorm)

[www.youtube.com/watch?v=xUYpo3cw9PA](http://www.youtube.com/watch?v=xUYpo3cw9PA)

Keystone vs. Indicator (Mahalo)

[www.youtube.com/watch?v=xRfdDE6scWA](http://www.youtube.com/watch?v=xRfdDE6scWA)

Ecological Pyramids (BrightStorm)

[www.youtube.com/watch?v=7G\\_fGuZPjPo](http://www.youtube.com/watch?v=7G_fGuZPjPo)

Energy Flow in Ecosystems (Bozeman)

[www.youtube.com/watch?v=lnAKiCtJIA4](http://www.youtube.com/watch?v=lnAKiCtJIA4)

Invasive Species (TED Ed)

[www.youtube.com/watch?v=spTWwqVP\\_2s](http://www.youtube.com/watch?v=spTWwqVP_2s)

Invasive Species (Minute Earth)

[www.youtube.com/watch?v=tmztPktOfzs](http://www.youtube.com/watch?v=tmztPktOfzs)