Carry Capacity Procedure

Background
Carrying capacity is the number of living things, plants and animals, which can be supported by an area of land or water at one time. Carrying capacity is usually limited by some aspect of a species' habitat requirements. In a particular area, only a certain amount of individuals will successfully get everything that they need in order to survive.

The birth rate of a particular animal will grow exponentially until the carrying capacity is reached. The carrying capacity therefore helps keep a species in check because a population can only get so large before individuals start to die off.

Procedure
Show the students an empty bucket that represents a particular piece of land. The water that you put in the bucket represents the living organisms that live on that land. Once the bucket is full, it has reached its carrying capacity. Additional organisms would have to find a different piece of land to insure that they can get everything that they need to survive (food, water, shelter, and space).

Brainstorm with the group different ecosystems and their characteristics. Link ecosystems back to climate. Climate plays a big role in the ecosystem—the plants and animals found in a certain ecosystem are adapted to the temperatures, moisture, etc.

How are changes in climate going to affect ecosystems? What sort of changes might we see as we move into the future as climate change continues? Will the same animals be able to continue living in their same ecosystems even if the climate changes?

Extension
Show the Pikas in Peril video to show how we are already starting to see impacts that climate change is having on sensitive species, such as the pika.