

## BIODIVERSITY CHALLENGE | TEACHER GUIDE



### Activity Overview:

In this challenge students will be participating, as either a class or individually, in a citizen science activity. The data the students report will be used in scientific research to help protect and increase the Kenyan savannah's biodiversity! After participating in the activity, students will then have a short discussion to connect their Change is Simple lesson on biodiversity to their challenge.

**Prep Time:** <5 minutes

**Activity Duration:** 20-30 minutes

## STANDARDS ALIGNMENT

### Common Core

- *SL.3.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.*

### NGSS

- *3-LS4-4: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.*

### MA Comprehensive Health

- *3.7.CE.4: Describe ways that the community can impact the health of people within that community.*
- *3.7.CE.6: . Use accurate information when discussing environmental health issues (e.g., littering, deforestation, recycling, climate change, clean water) that impact people's health.*

## MATERIALS NEEDED

- *Student computers*
- *Projector/Smartboard (if activity is done as a class)*
- *Guiding questions (digitally or hard copy)*
- *Wildwatch Kenya [Link](#)*



## BACKGROUND INFORMATION

Biodiversity refers to the variety of life in a habitat or ecosystem, specifically the amount of species diversity versus the total amount of organisms. The greater the variety of species there are in an area, the more biodiverse it is. The survival of many species in a biome often depends on the presence of one or more keystone species, animals on which a food chain is reliant. In the temperate forest biome, where Massachusetts is located, the white-tailed deer, black bear, and gopher tortoise are all keystone species that play a vital role in their ecosystem. When populations keystone species are threatened, the effects can be felt throughout their food web. If the keystone species of a biome is gone, the biome may collapse. Biodiversity helps ecosystems remain resilient to environmental changes. Some ways humans can help increase biodiversity in our local biomes are planting local vegetation, keeping trash out of ecosystems, and creating safe backyard spaces for local creatures.

## ACTIVITY RUNDOWN



1. Project the Wildwatch Kenya website to the class and go through the tutorial that pops up on the main page together.
2. Set expectations for students. The data they collect needs to be as accurate as possible because it will be used by real life scientists. The work they do will actually contribute to protecting Kenya's animals! (If students make a mistake, it is okay, each photo gets passed through a few citizen scientists!)
3. Students will compile data from the photos individually for about 15-20 minutes.
4. Once they finish with their activity, use the guiding questions to have a conversation with them and connect their learning from their Change is Simple lesson to the work they did in their challenge!

## GUIDING QUESTIONS

1. What is biodiversity and why is it important?
2. How do humans impact biodiversity?
3. What are some ways we can preserve biodiversity?
4. Did you notice a lot or a little biodiversity in the pictures you were observing?