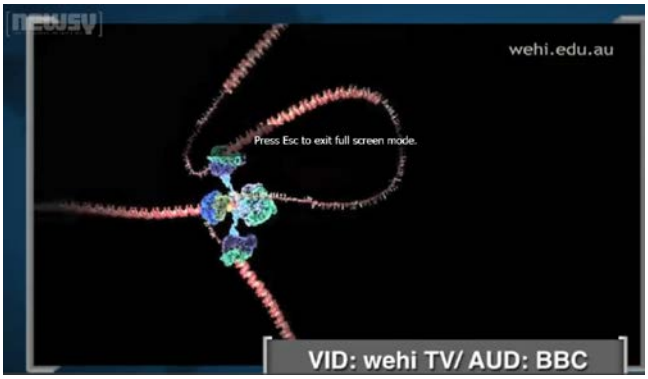
Title: How Mutated Are You?		
Date: June 14, 2011	**Grade:** 7th	**Subject:** Science
URL: http://www.newsy.com/videos/how-mutated-are-you/		



Teacher Information:

This would be a review and opening story for information about mutations. The video explains how the average human contains 60 mutations that are inherited from their parents. The video does not discuss specific human mutations but does explain that the average human has mutations.

Phase	Task(s)	Time
Preparation	Review Vocabulary – *Mutation, Genetics, Genome, DNA, Evolution* • Match vocabulary words to their images and definitions in partners	10 minutes
Watch	As a class watch the Newsy.com video: **How Mutated Are You?** http://www.newsy.com/videos/how-mutated-are-you/	2:04 minutes (Activity will take closer to 3 minutes)

Re-watch and answer	Re-Watch the video and answer the following questions as a class
	• The average human acquires how many mutations from their parents?
	• Do children get more mutations from their mother or father?
	• What are some factors that could affect the mutations?
	  o Age of parent
	  o Environment exposure
	  o Genetics
	• Majority of these mutations have what kind of an affect? (A lot,
		10 minutes

	some, none)	
Group Work	Break up into groups of 2-3 and research other animals or plants. Select one animal or plan to show the mutations that have occurred over time that have helped that organism survive. Example: Rose – thorns keep predators from eating and destroying species. The groups must – • Present information during next class period • Visual Aide – poster or power point • Must explain mutations of the organism • How it has changed (Evolved) • How the mutation was beneficial for the organism	20 minutes
Discussion	Class will close by discussing human mutations that could be beneficial for us as well as how some mutations might be harmful	10 minutes

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Extended Learning Activities – Optional

Parent Involvement	Have students go home and ask parents for assistance. Write down some genetic traits that their parents possess. Also requires grandparents information as well. Track how these genetic traits have changed from generation to generation **Example**: Eye Color – Mom blue, Dad Brown – Child brown. Grandparents Mom – blue & brown, Grandparents – dad – Brown and brown.	Varies
Research	Research a specific human mutation and describe how it might affect the individual it who may acquire that genetic mutation • Down Syndrome • Autism	**Varies**
Research	Research what Scientists are doing to reduce the likelihood of a child being born with a genetic mutation that affects their lives. Is there a way we can repair the mutated genes? Have they discovered where some of the mutated genes come from?	**Varies**
Report	Reseach one of the below articles and/or one of the articles in the newscast and write a brief summary about the information provided.	**Varies**

Looking for related resources? Check out…

DailyMail
This is a detailed article on the information presented in the Newsy.com article. It goes deeper indepth about how our genetic mutations exist and how they affect humans.
http://www.dailymail.co.uk/sciencetech/article-2003021/Why-X-men-Scientists-discover-60-new-genetic-mutations-EVERY-person.html#ixzz1PBSu7I80

MedicalXPress
This article discusses how there is a common genetic mutation that makes a connection to high blood pressure and causes patients to retain too much sodium.
http://medicalxpress.com/news/2012-05-common-genetic-mutation-sodium-retention.html

Doctors Lounge
This article discusses how genetic mutations can predict breast cancer treatment and how your body will respond to the treatment.
http://www.doctorslounge.com/index.php/news/pb/29718

EurekaAlert!
This article discusses how the Fragile X gene may be more common than people earlier believed. The article explains what happens if a child is born with Fragile X and the likelihood of an individual acquiring this genetic mutation.
http://www.eurekalert.org/pub_releases/2012-06/uow-fxg061412.php

Newsy.com
This video discusses about Autism. The video discusses the idea of genetics and environment both play a role in Autism Disorder
http://www.newsy.com/videos/two-studies-emphasize-environment-in-autism-cases/

Gizmag
This article discusses how individual genes can be found and replaced in order to reduce mutations. This has been done on a "large-scale" with DNA for a bacteria cell.
http://www.gizmag.com/large-scale-editing-of-dna/19234/