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Notes and resources on genetic engineering

pgEd’s complete curriculum, available for free at: <http://www.pged.org/lesson-plans/>

Map-Ed.org platform where students can work their way through a series of quizzed and pin themselves on a world map: [www.map-ed.org](http://www.map-ed.org)

**Gene therapy using viral vectors:**

“The biotech death of Jesse Gelsinger by Sheryl Gay Stolburg. <http://www.nytimes.com/1999/11/28/magazine/the-biotech-death-of-jesse-gelsinger.html>

“Gene therapy helps blind children see” by Jocelyn Kaiser. <http://news.sciencemag.org/biology/2009/10/gene-therapy-helps-blind-children-see>

Ricki Lewis’s accessible and engaging book about Corey Haas and gene therapy, “The Forever Fix”: <http://www.amazon.com/The-Forever-Fix-Therapy-Saved/dp/1250015774>

Dr. Lewis maintains a blog that often features gene therapy and genetic engineering news and views: <http://blogs.plos.org/dnascience/author/rlewis/>

**Mitochondrial disease/Mitochondrial transfer technology**

“The Brave New World of three-parent IVF” by Kim Tingly.

<http://www.nytimes.com/2014/06/29/magazine/the-brave-new-world-of-three-parent-ivf.html>

“UK government backs 3-person IVF” by James Gallagher. <http://www.bbc.co.uk/news/health-23079276>

Scitable’s case study on “three parent embryos” <http://www.nature.com/scitable/forums/genetics-generation/case-study-in-three-parent-embryos-118504898>

**CRISPR:**

The basics: <http://en.wikipedia.org/wiki/CRISPR>

“Erasing a genetic mutation” by Anne Trafton. <http://newsoffice.mit.edu/2014/erasing-genetic-mutation>

“Genome editing: The experiment” by Christina Larson. <http://www.technologyreview.com/featuredstory/526511/genome-editing/>

**CRISPR and antibiotics:**

“ Novel antibiotic class created” by Michael Eyre. <http://www.bbc.co.uk/news/health-29306807>

“CRISPR snips away antibiotic resistance” By Kevin Mayer.

<http://www.genengnews.com/gen-news-highlights/crispr-snips-away-antibiotic-resistance/81250378/>

**CRISPR and de-extinction**

National Geographic’s materials are very appropriate for students (includes several videos about de-extinction and the technology behind the idea): <http://www.nationalgeographic.com/deextinction/>

“Will a Mammoth walk again?” <http://ngm.nationalgeographic.com/2009/05/mammoths/cloning-interactive>

**CRIPSR as an approach to stopping malaria with an ethics discussion:**

“A call to fight malaria one mosquito at a time” by Carl Zimmer. <http://www.nytimes.com/2014/07/17/science/a-call-to-fight-malaria-one-mosquito-at-a-time-by-altering-dna.html?_r=0>