1. Bio-Rad pGLO Bacterial Transformation Kit

With this educational kit, students use Bio-Rad's exclusive pGLO plasmid to transform bacteria to express the green fluorescent protein (GFP) gene from the bioluminescent jellyfish *Aequorea victoria*, which causes the bacteria to glow green under UV light. The same procedure is used to create "designer proteins", which have led to the explosion of new health treatments, agricultural applications, and environmental solutions. Use this kit to illustrate the concept of DNA > RNA > Protein > Trait and the roles that external and internal factors play in gene regulation - all within the exciting context of genetic engineering.

- Hands-on genetic engineering - transform bacteria with a jellyfish gene
- Visible, dramatic phenotype - transformants glow green under UV light
- Teaches gene regulation - GFP expression is under the control of an arabinose-inducible promoter
- Reinforces maths skills - students calculate transformation efficiency
- Consumable reagents for kit includes: pGLO plasmid, *E. coli*, nutrient broth, transformation solution, ampicillin, arabinose - for educational use only

Code	Description	Pack	Price
ELE1496	pGLO bacterial transformation kit	Each	**£120.38**
ELE1418	Transformation reagent refill kit	Each	**£68.33**

2. GMO Investigator Kit

With this activity, students engage in a complete investigation in which they gather sample food items, extract DNA from the samples, amplify the DNA using polymerase chain reaction (PCR), and use agarose gel electrophoresis to test for the presence of two DNA sequences that are present in >85% of genetically modified (GM) crops: the 35S promoter of the cauliflower mosaic virus and the terminator of the nopaline synthase gene of *Agrobacterium tumefaciens*.

- Extract DNA from your favourite foods
- Use PCR and gel electrophoresis to determine whether the foods contain GMO ingredients
- Conduct a post-lab debate activity about the benefits, risks, and perceptions of genetically engineered food
- Consumable refill kit contains: PCR master mix, primers, positive control, PCR molecular weight ruler, orange G loading dye - for educational use only

Code	Description	Pack	Price
ELE1420	GMO investigator kit	Each	**£205.86**
ELE1422	GMO investigator kit reagent refill pack	Each	**£101.53**

1



2

