

**Edmore Public School**  
**706 Main St, Edmore, ND 58330**

**Biology Lesson Plan**

**Dates:**  
 April 22 - 26, 2024

**Time and Period:**  
 2:32 - 3:25 PM, Seventh Period

**Performance Standard:**

**HS-LS3-1**

Construct an explanation to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

**HS-LS3-2**

Make and defend a claim based on evidence that inheritable genetic variations result from various factors.

**Monday, April 22**

<b>Topic</b>	DNA Forensics and Color Pigments, pp. 262 - 264
<b>Objectives</b>	Perform DNA forensics using food coloring to enhance their understanding of DNA fingerprinting,
<b>Bell Ringer</b>	In three steps, state the steps for DNA fingerprinting
<b>Procedure / Instructional Delivery</b>	Guided Practice, Interactive Discussion, Hands - on / Laboratory Activity
<b>Assessment</b>	DNA Forensics and Color Pigments, pp. 262 - 264

**Tuesday, April 23**

<b>Topic</b>	Introduction to Forensics - DNA Fingerprinting Completion of Laboratory Activity
<b>Objectives</b>	Describe what DNA fingerprinting is, what it is used for, and how it is used in paternity testing and forensics
<b>Bell Ringer</b>	What are the factors that lead to unique fingerprints?
<b>Procedure / Instructional Delivery</b>	Guided Practice, Interactive Discussion, Hands - on / Laboratory Activity
<b>Assessment</b>	Introduction to Forensics - DNA Fingerprinting Completion of Laboratory Activity

Wednesday, April 24	
<b>Topic</b>	Genetic Engineering, pp. 265 - 267
<b>Objectives</b>	Discuss how DNA can be modified to create genetically modified organisms and treat diseases.
<b>Bell Ringer</b>	Define <i>Recombinant DNA</i>
<b>Procedure / Instructional Delivery</b>	Guided Practice, Interactive Discussion, Hands - on / Laboratory Activity
<b>Assessment</b>	Genetic Engineering, pp. 265 - 267

Thursday, April 25	
<b>Topic</b>	Bacterial Transformation
<b>Objectives</b>	Use a plasmid vector to transform bacteria with genes for Green Fluorescent Protein (GFP) and antibiotic resistance in a controlled experiment.
<b>Bell Ringer</b>	Define <i>plasmid vector</i>
<b>Procedure / Instructional Delivery</b>	Guided Practice, Interactive Discussion, Hands - on / Laboratory Activity
<b>Assessment</b>	Bacterial Transformation Worksheet

Friday, April 26	
<b>Topic</b>	(Continuation) Bacterial Transformation
<b>Objectives</b>	Use a plasmid vector to transform bacteria with genes for Green Fluorescent Protein (GFP) and antibiotic resistance in a controlled experiment.
<b>Bell Ringer</b>	What is Green fluorescent protein (GFP)?
<b>Procedure / Instructional Delivery</b>	Guided Practice, Interactive Discussion, Hands - on / Laboratory Activity
<b>Assessment</b>	Bacterial Transformation Worksheet

