

UNIT OVERVIEW

REPRODUCTION

Listed below is a summary of the activities in this unit. Note that the total teaching time is listed as 14–21 periods of approximately 45–50 minutes (approximately 3–4 weeks).

Activity Description	Topics	Advance Preparation	Assessment	Teaching Periods
<p>1. View and Reflect: Joe’s Situation Students are introduced to a scenario of a student who has just learned he may have inherited a genetic condition (Marfan syndrome).</p>	<p>genes, genetic disorders LITERACY</p>	<p>Preview the video, preview Activity 7, plan when to set up seedlings for demo.</p>		1–2
<p>2. Modeling: Creature Features Students develop models to investigate the inheritance of a trait in imaginary creatures.</p>	<p>gene, trait, sexual reproduction, breeding, offspring, inherited, modeling, hypothesis LITERACY</p>	<p>Obtain chart paper; obtain black, blue, and orange markers; copy Student Sheets; make templates; preview Activity 7; plan when to set up seedlings for demo.</p>	<p>MOD QUICK CHECK A2</p>	1–2
<p>3. Reading: Reproduction Students read about the differences between sexual and asexual reproduction at the cellular level.</p>	<p>cell, heredity, offspring, asexual reproduction, sexual reproduction, clone, fertilization LITERACY</p>	<p>Copy Student Sheet, preview Activity 7, plan when to set up seedlings for demo.</p>	<p>EXP QUICK CHECK A1 MOD A3</p>	2
<p>4. Investigation: Gene Combo Students model the inheritance of single- gene traits by collecting and analyzing data from coin tosses.</p>	<p>gene, inherited, fertilization, allele, dominant, recessive, random, probability, modeling, hypothesis MATHEMATICS</p>	<p>Obtain pennies and small cups (optional), copy Student Sheet.</p>	<p>ODA: Proc ARG QUICK CHECK A6 EXP A8</p>	1–2
<p>5. Problem Solving: Gene Squares Students use Punnett squares to model sexual reproduction and predict the approximate frequencies of traits among offspring.</p>	<p>gene, trait, allele, sexual reproduction, offspring, dominant, recessive, probability, random LITERACY, MATHEMATICS</p>	<p>Copy Student Sheet.</p>	<p>MOD A5</p>	2–3
<p>6. Reading: Mendel, First Geneticist Students read about Gregor Mendel’s experiments with pea plants.</p>	<p>technology, engineering design process, engineer, scientist LITERACY</p>		<p>EXP A5</p>	1–2
<p>7. Laboratory: Do Genes Determine Everything? Students design an experiment to investigate the effect of the environment on such plant traits as seedling color.</p>	<p>gene, allele, trait, heredity, heterozygous, homozygous, nature vs. nurture LITERACY, MATHEMATICS</p>	<p>Obtain masking tape, permanent markers.</p>	<p>PCI: Proc. ODA: Proc. AID: A1 EXP A2</p>	2