

<b>Materials Needed for Complete Exercise</b>		
<b>Item</b>	<b>Supply company</b>	<b>Item Number</b>
<b>Advance Preparation</b>		
<i>D. melanogaster</i> heat shock white-eyed strain (TE near eye color gene)	Bloomington Drosophila Stock Center ( <a href="http://flystocks.bio.indiana.edu/">http://flystocks.bio.indiana.edu/</a> )	60739
<i>D. melanogaster</i> heat shock white-eyed strain (TE far from eye color gene)	Bloomington Drosophila Stock Center	60740
<i>D. melanogaster</i> Zimbabwe (wild-type) S29	Bloomington Drosophila Stock Center	60741
Carolina Drosophila Kit (FlyNap®, 72 vials, 72 plugs, media, labels, transfer cards)	Carolina Biological Supply ( <a href="http://www.carolina.com">www.carolina.com</a> )	173052
Carbon Dioxide Anesthetizer (optional)	Carolina Biological Supply	173034
<b>Day 2: Inheritance and X-linkage</b>		
Sorting Brushes (optional)	Carolina Biological Supply	173094
<b>Day 3: DNA Extraction</b>		
DNA Extraction Buffer	Reagents needed: 10mM Tris-HCl, pH 8.2; 1mM EDTA; 25mM NaCl	
Proteinase K (20 mg/mL)	Reagents needed: 0.02g Proteinase-K (Sigma Aldrich: P-6556); 0.6ml 10mM Tris-HCl, pH 7.6; 0.4ml glycerol	
Proteinase K Solution (20 mg/mL) (Alternative to above)	New England BioLabs, Inc. ( <a href="http://www.neb.com">www.neb.com</a> )	P8107S
1.7-ml Microcentrifuge tubes	Genesee Scientific ( <a href="http://www.geneseesci.com">www.geneseesci.com</a> )	22-281
0.2-ml 8-strip PCR tubes	Genesee Scientific	27-125
<b>Day 3: PCR</b>		
Oligonucleotide Primers (see below for specifications)	IDT DNA ( <a href="http://www.idtdna.com/calc/analyzer">www.idtdna.com/calc/analyzer</a> )	
0.2-ml 8-strip PCR tubes	Genesee Scientific	27-125
DNA Taq Polymerase	New England BioLabs, Inc.	M0267S
10X ThermoPol PCR buffer (20mM Mg <sup>++</sup> )	New England BioLabs, Inc.	M0267S
Deoxynucleotide Set	Bioline USA Inc.	BIO-39025

(100mM) or Deoxynucleotide Mix (40mM)	<a href="http://www.bioline.com/us/">(www.bioline.com/us/)</a> Bioline USA Inc.	BIO-39043
Thermal cycler (Applied Biosystems® 2720 )	Life Technologies Corp. <a href="http://www.lifetechnologies.com/us/en/home.html">www.lifetechnologies.com/us/en/home.html</a>	4359659
<b>Day 4: Gel electrophoresis</b>		
Agarose LE	Agarose Products <a href="http://agaroseproducts.com">agaroseproducts.com</a>	AP101
20X Lithium Borate Buffer	Faster Better Media LLC	LB20-1
SYBR® Safe DNA Gel Stain (Invitrogen™)	Life Technologies Corp.	S33102
100-bp DNA ladder	New England BioLabs, Inc.	N3231S or L
6X Gel Loading Dye (Bromophenol Blue)	New England BioLabs, Inc.	B7021S
VWR® Midi Plus Electrophoresis System w/15x15cm gel tray) (or similar, if not already available in your lab)	VWR International, LLC <a href="http://us.vwr.com/">us.vwr.com/</a>	89032-296
VWR™ 300V Electrophoresis Power Supply (or similar, if not already available in your lab)	VWR International, LLC	93000-744