

Genetic Inheritance

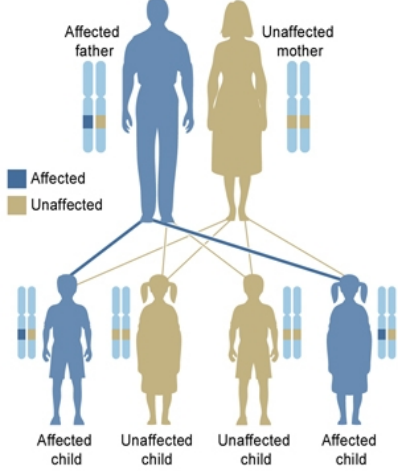
Teacher Information Sheet

There are several ways that a trait, disorder, or disease can be passed down through families.

<p>Autosomal Dominant If a disease is autosomal dominant, it means you only need to get the abnormal gene from one parent in order for you to inherit the disease. One of the parents may often have the disease.</p>	<p>Autosomal Recessive An autosomal recessive disorder means two copies of an abnormal gene must be present in order for the disease or trait to develop.</p>
<p>X-linked Dominant If the father carries the abnormal X gene, all of his daughters will inherit the disease and none of his sons will have the disease. That is because daughters always inherit their father's X chromosome.</p>	<p>X-linked Dominant If the mother carries the abnormal X gene, half of all their children (daughters and sons) will inherit the disease tendency.</p>
<p>X-linked Recessive Father He has two unaffected daughters who each carry one copy of the gene mutation, and two unaffected sons who do not have the mutation.</p>	<p>X-linked Recessive Mother She has an affected son, an unaffected daughter who carries one copy of the mutation, and two unaffected children who do not have the mutation.</p>

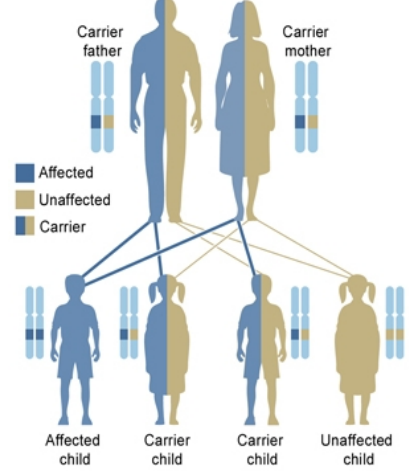
Teacher Sheet 1 - Specifically identify the different patterns of genetic inheritance in the series of images shown below.

Autosomal dominant



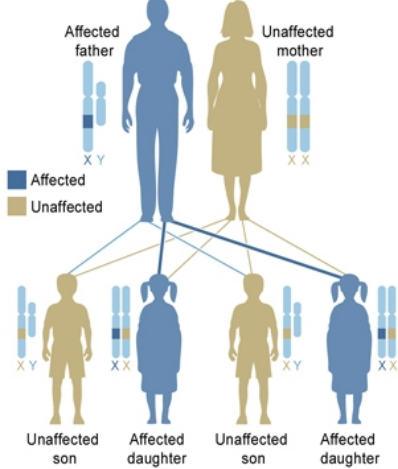
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Autosomal recessive



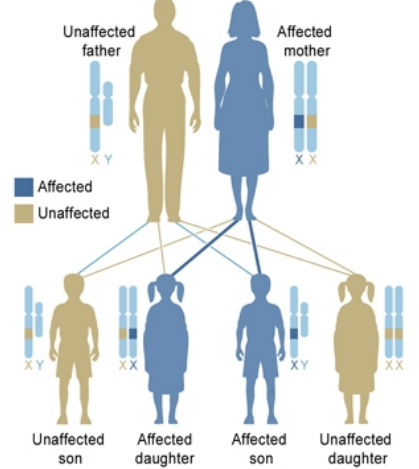
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X-linked dominant, affected father



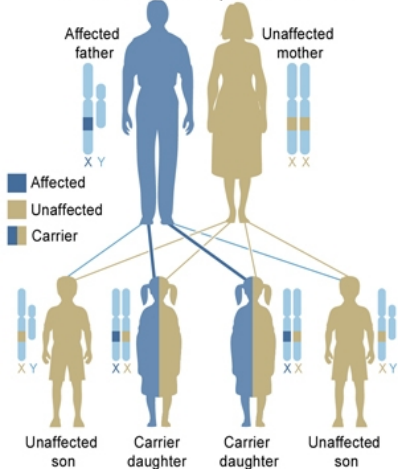
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X-linked dominant, affected mother



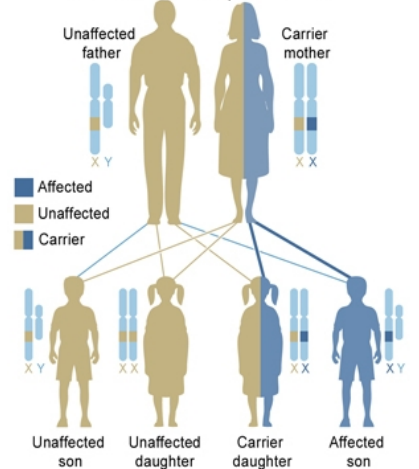
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X-linked recessive, affected father



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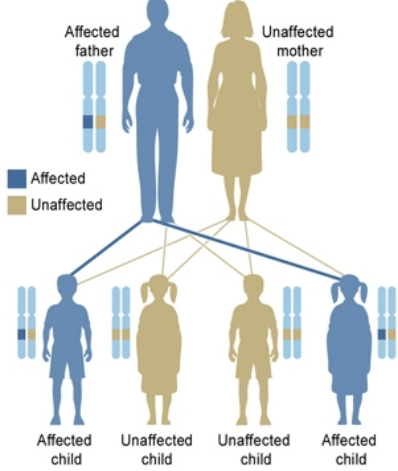
X-linked recessive, carrier mother



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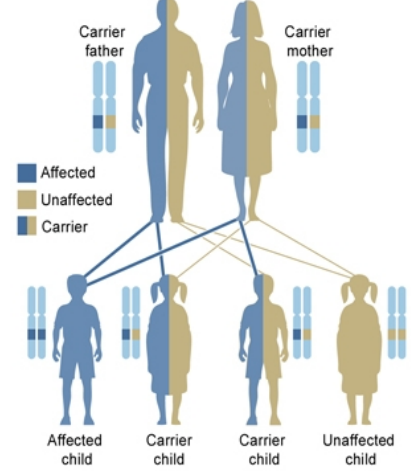
Teacher Sheet 2 - Identify some examples of human genetic disorders that follow these patterns of inheritance.

Autosomal dominant



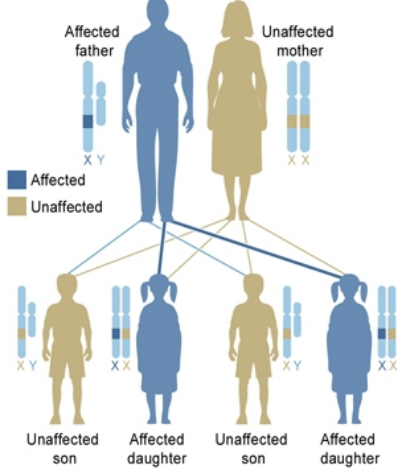
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Autosomal recessive



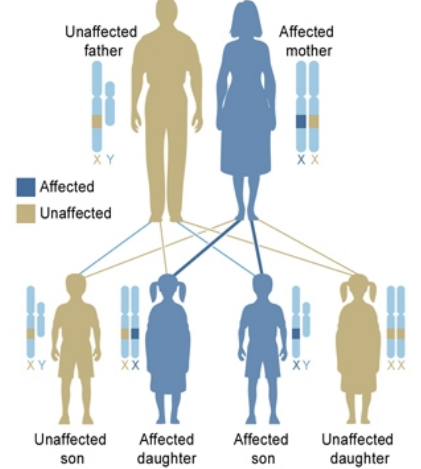
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X-linked dominant, affected father



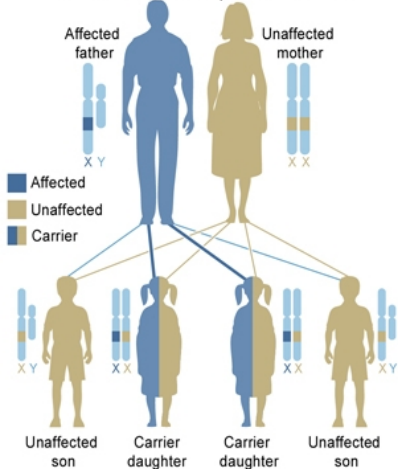
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X-linked dominant, affected mother



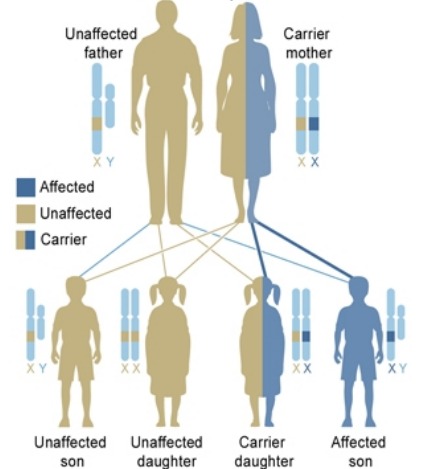
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X-linked recessive, affected father



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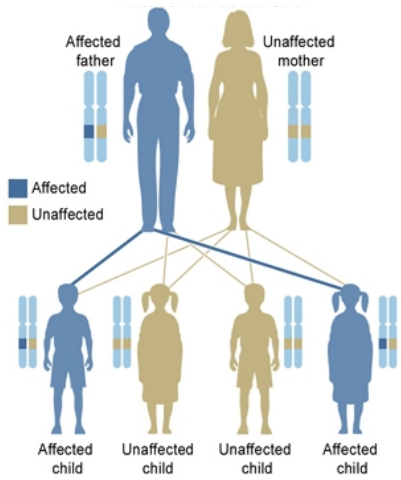
X-linked recessive, carrier mother



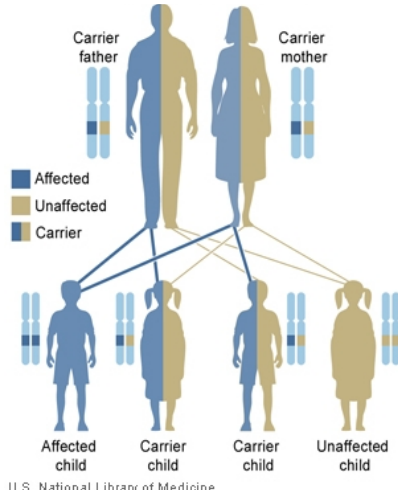
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Duchenne muscular dystrophy, Haemophilia

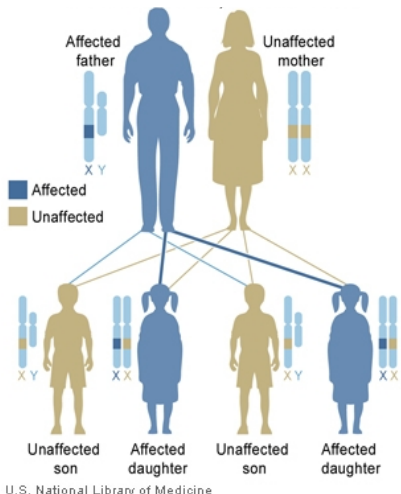
Worksheet 1 - Specifically identify the different patterns of genetic inheritance in the series of images shown below.



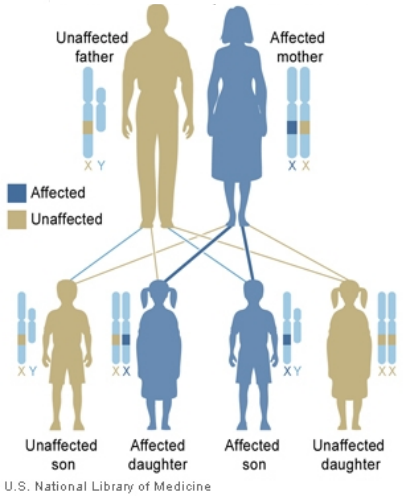
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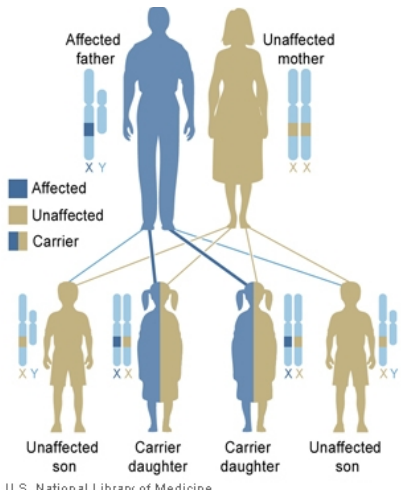
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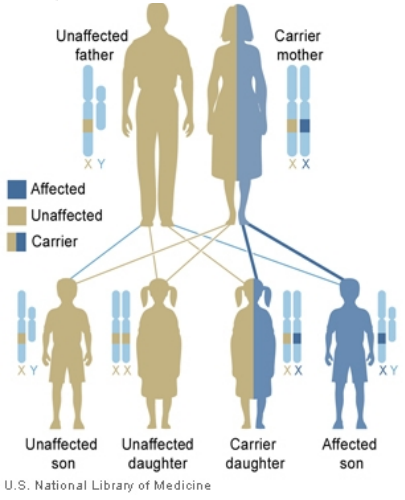
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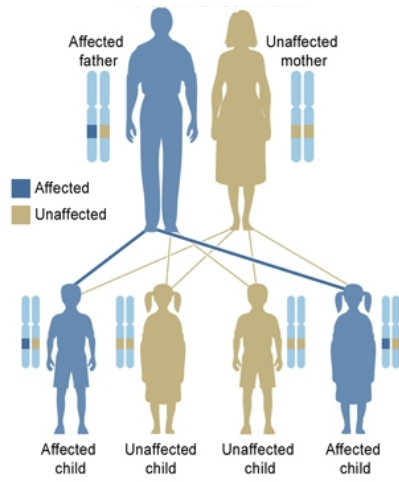


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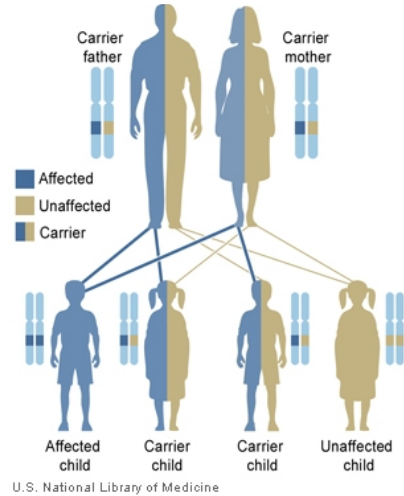


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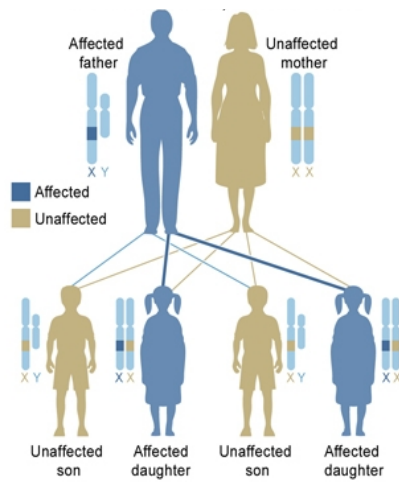
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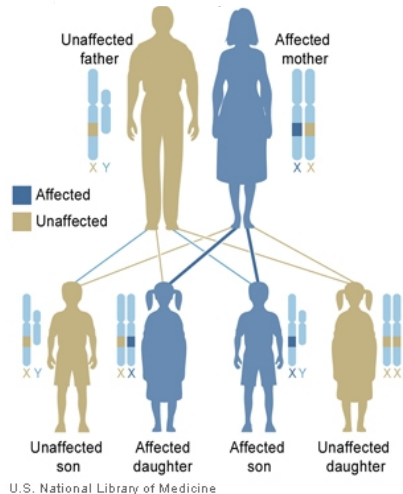
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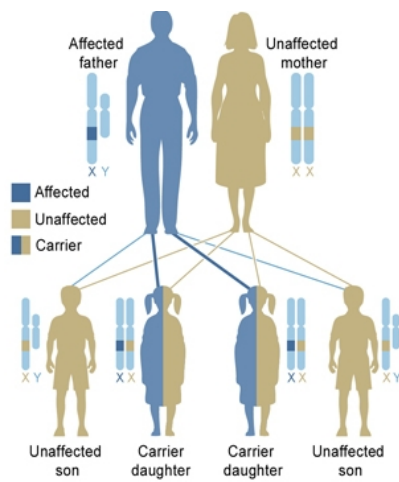
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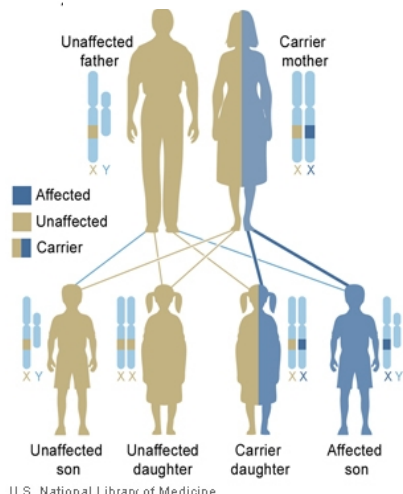
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