

Title: Pedigree

Page:

Standard/Benchmark:

Date:

Essential Question: What does a pedigree reveal? Why do you think a pedigree is important? How can siblings look different from each other and their parents?



Anticipation Guide: True or False?

Strategy: "Think-pair-share"

7. A pedigree is a chart showing the passing down of traits from generation.
Explain:

8. A female carrying for a recessive is represented with an unfilled circle.
Explain:



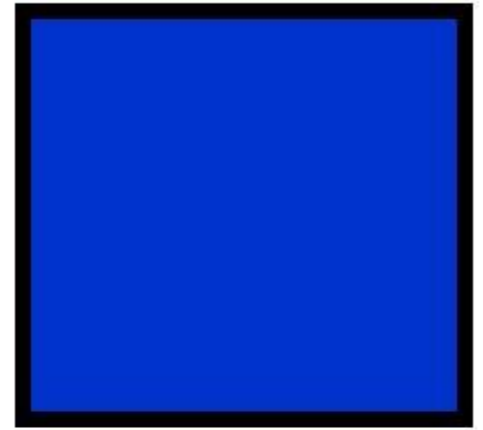
Pedigree

- A pedigree is an organized chart used to show passing of traits through generations.

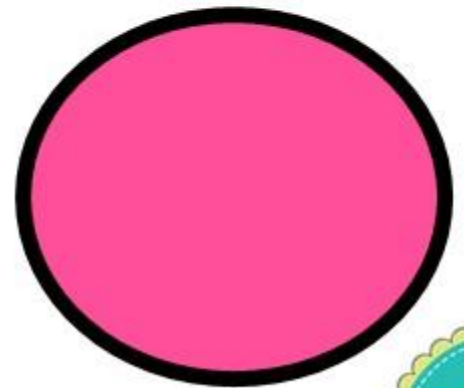


Gender

- Squares represent males

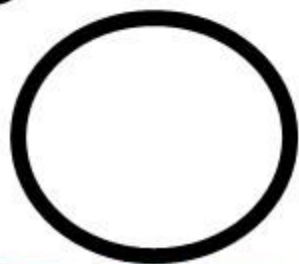


- Circles represent females



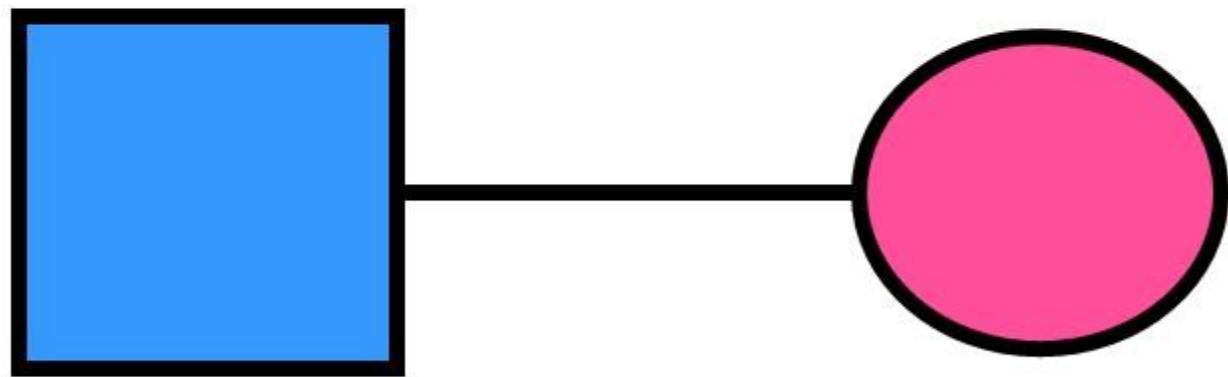
Presence of Trait

- Filled in squares or circles mean a recessive trait is present.
- Half-filled in square or circle means a person is heterozygous dominant for trait.
- A square or circle not filled in represents a homozygous, dominant trait.



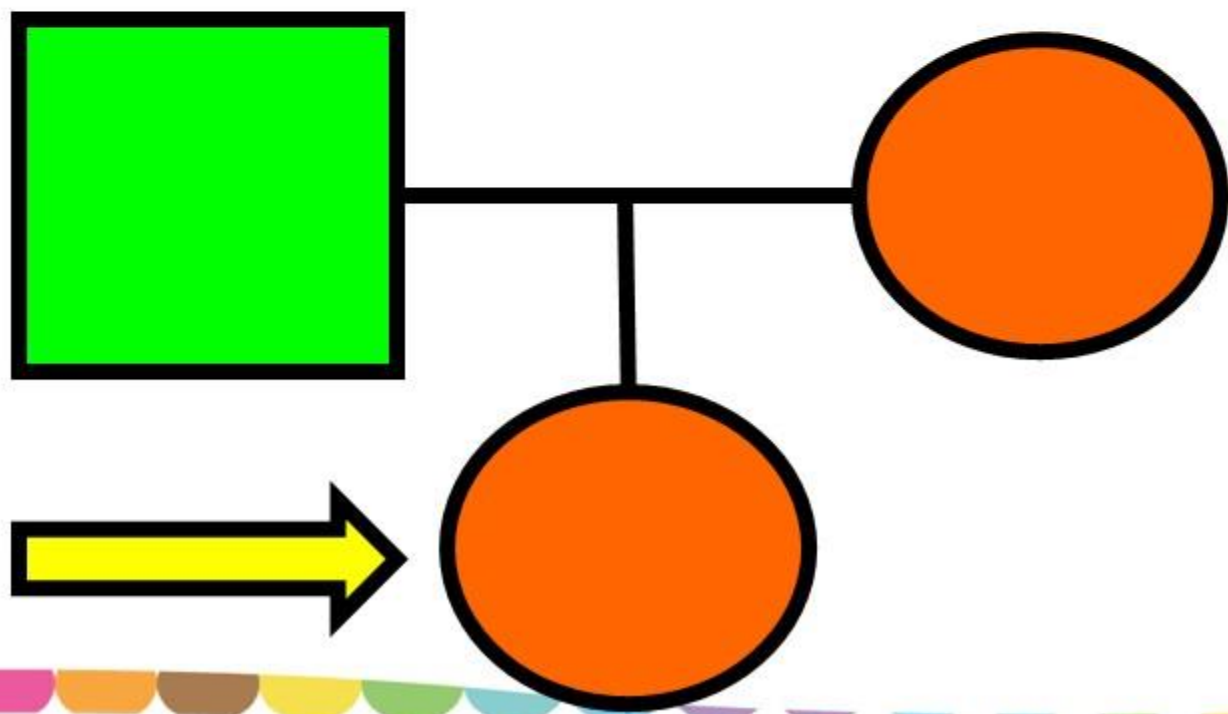
Relationships

- Horizontal line connecting male and female indicates a mating.



Relationships

- Vertical line from this type of horizontal line indicates offspring.

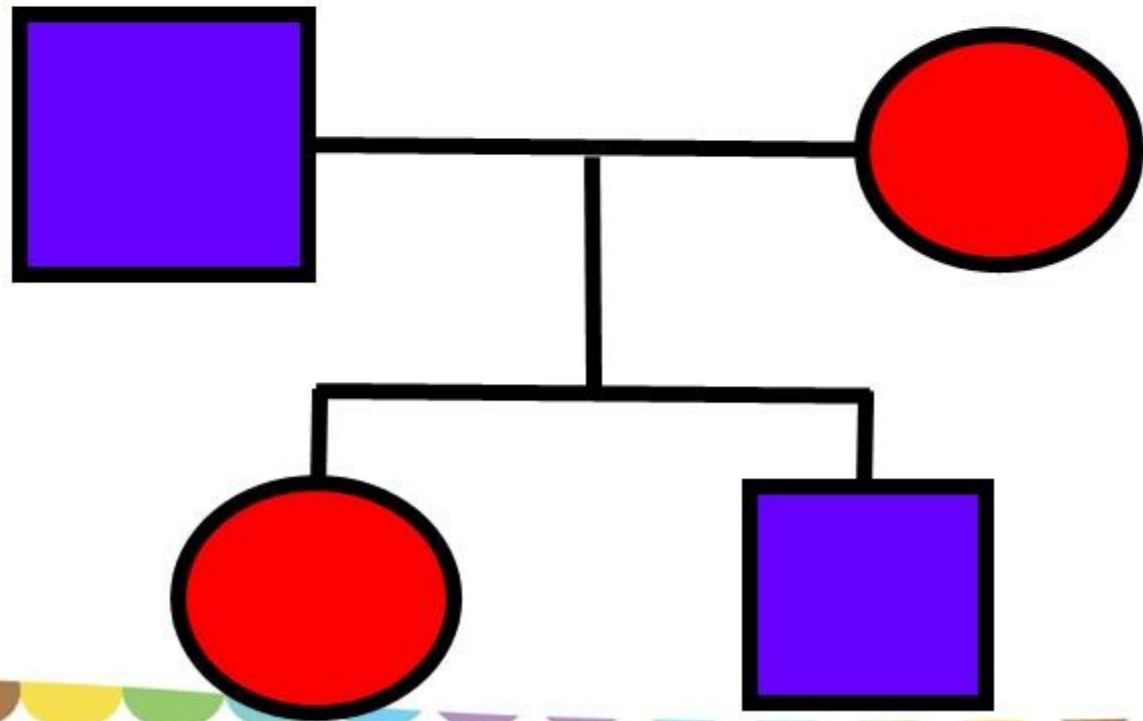


Offspring



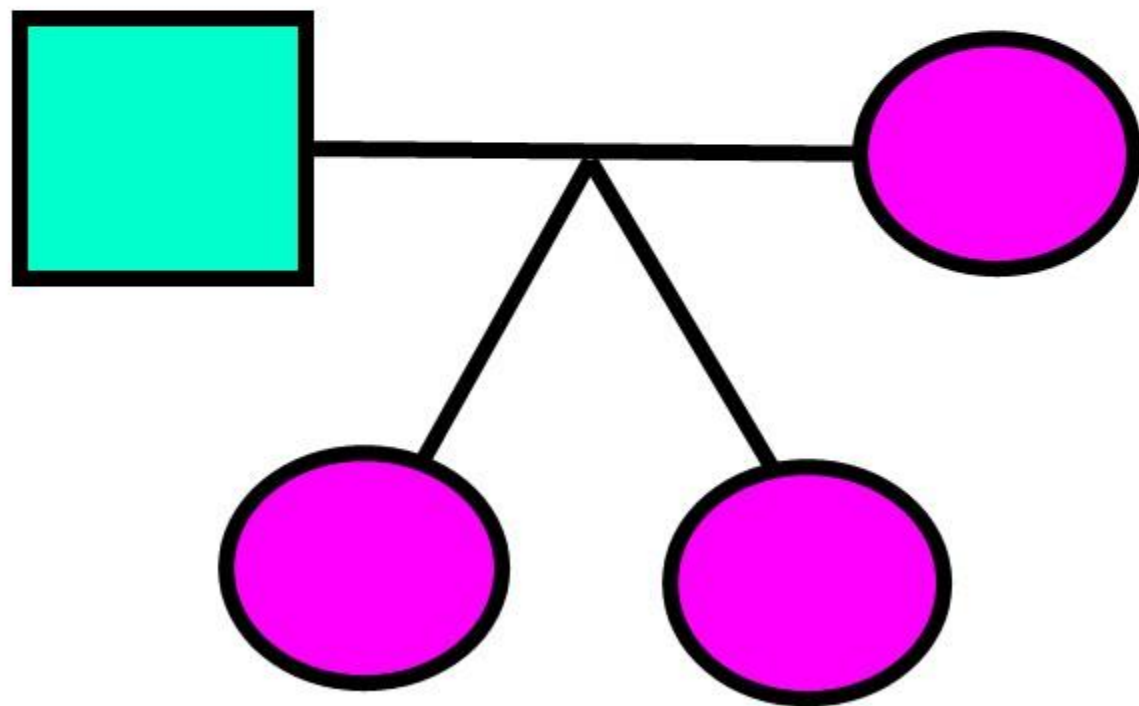
Several offspring

- If more than one offspring, another horizontal line with a vertical line extending from it for each offspring.



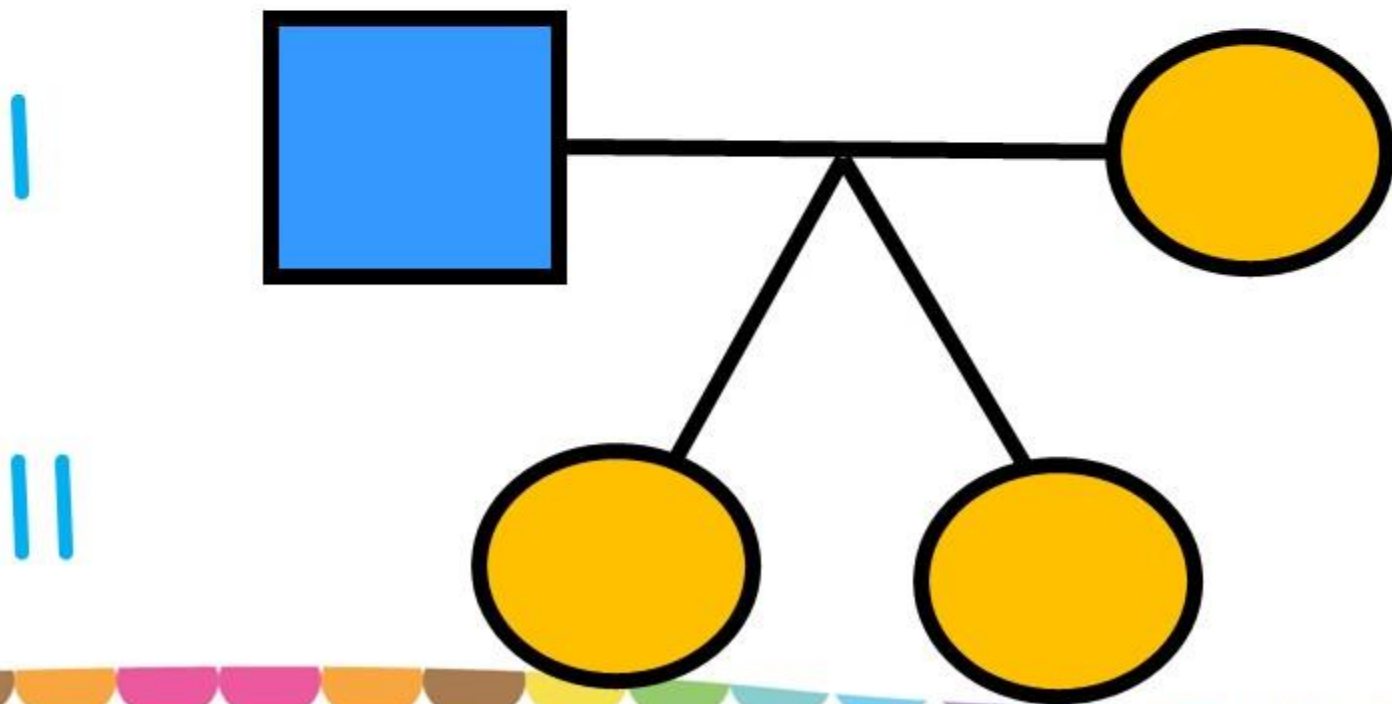
Twins

- If twins, number from oldest to youngest and connect lines.



Generations

- Number generations or age groups using Roman Numerals



Fun Fact!

- Genetic counselors can meet with parents to help them identify any possible genetic disorders in the family and then they might advice them to do further testing.



Quiz time!

- **Ready:** Number 1-5 behind notes
- **Go:** Write correct letter and mark if incorrect.
- **Back:** Highlight, add to notes or drawings



1. A pedigree can tell you all of the following except what?

- A. The age of the person
- B. The traits they carry
- C. Their relatives
- D. Whether or not they have siblings



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A. The age of the person

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C. Their relatives

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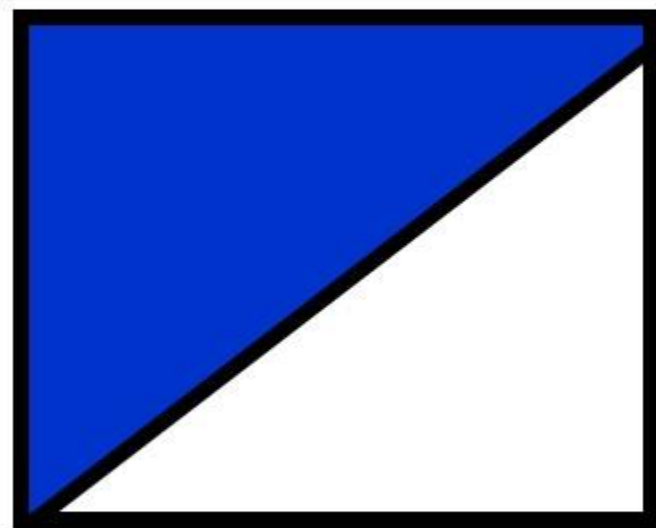
2. What symbol is used to show a male heterozygous for a trait?

- A. Square filled in
- B. Square half filled in
- C. Circle filled in
- D. Circle half filled in



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3. What can be inferred with someone being heterozygous for a trait?

- A. The recessive trait can never be shown
- B. The recessive trait will be shown in at least one offspring.
- C. The recessive trait might be shown in the next offspring.
- D. The dominant allele will always be expressed in the future offspring.



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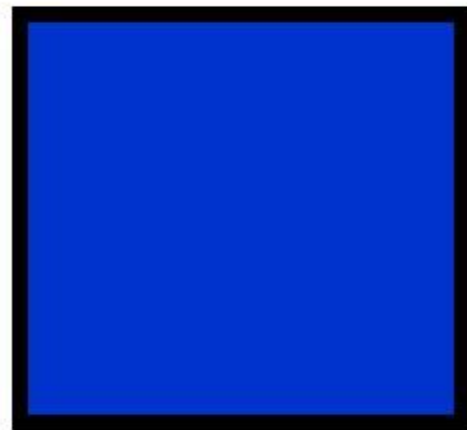
4. A male with a homozygous, recessive trait is represented with what?

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- C. Unfilled square
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5. Toby has a family pedigree extending out to his great grandparents. What generation is Toby?

- A. First
- B. Second
- C. Third
- D. Four



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IV



Anticipation Guide Statements and Answers

1. **Cover:** Check back to the unit cover or warm-up
2. **After:** In the "after" section, state whether true or false based on what was learned.
3. **Explain:** Be prepared to explain in summary



7. A pedigree is a chart showing the passing down of traits from generation. Explain:



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True! A pedigree reveals the passing of traits from one generation to the next.



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False! A filled circle represents a recessive trait or half-filled if heterozygous.





What does a pedigree reveal?

- "A pedigree shows ____ (describe)."

Why do you think a pedigree is important?

- "I think a pedigree is important because ____ (explain)."

How can siblings look different from each other and their parents?

- "Siblings can look different from each other and their parents because ____ (explain)."

