

Traits Bingo

Abstract

Students cross off or color bingo squares in response to questions about their traits. This activity is designed to be used as a review following An Inventory of My Traits, Generations of Traits, and A Tree of Genetic Traits. These activities can be found in the *Basics and Beyond: An Introduction to Heredity (Grades 5-7)* module on the Learn.Genetics website.

Logistics

Time Required

- ▶ **Class Time:**
20 minutes
- ▶ **Prep Time:**
15 minutes to review activity and copy student pages

Materials

Copies of student pages, pen, pencil or crayon, PTC paper and hard candies if you haven't tested for this trait previously

Prior Knowledge Needed

Traits are inherited from parents, familiarity with traits listed on the bingo card is helpful

Appropriate For:

Primary Intermediate Secondary

Learning Objectives

- ▶ Students will inventory their own inherited traits.
- ▶ Students will compare traits to determine which are most and least common in the class.

Special Features You'll Find Inside

- ▶ Spanish translations of student pages.

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Classroom Implementation

Note: One of the traits in this activity is the ability to taste PTC. If you have not already tested for this trait in previous activities follow these steps before beginning:

- Give each student a piece of PTC paper and instruct them to place the paper on the tip of their tongue to see if they can taste the chemical. (PTC paper can be ordered inexpensively from: Ward's Natural Science (<http://www.wardsci.com>), Sargent Welch (www.sargentwelch.com), or Carolina Math and Science (www.carolina.com))
- Hand out a hard candy to each student, as the taste of PTC is bitter and slightly unpleasant.

Activity instructions:

- Distribute one or more Bingo cards to each student and instruct them not to mark any squares unless told to do so.
- Read the Bingo questions (page 3) one by one (in order or randomly), instructing students to mark the squares with an X or color them in.
- Continue to read Bingo questions (page 3) until a student obtains a bingo.

Common Misconceptions

Students may think that they inherit traits from aunts, uncles, cousins and siblings because family members point out the resemblance between students and their relatives. In fact, traits are only inherited from parents, and, by extension, grandparents. Questions #5 and #6 aim to clear up this misconception should it exist.

Quantities

Per Student

- ▶ One copy of page S-1
- ▶ (Optional) One strip of PTC paper if you have not tested for this trait.
- ▶ (Optional) Hard candy if testing for the ability to taste PTC.

Note:

You may also choose to use numbered cards or slips of paper for students to draw at random. When a particular number is drawn, read the corresponding question from the list of Bingo questions

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Standards

U.S. National Science Education Standards

Grades 5-8:

- Content Standard C: Life Science - Reproduction and Heredity; every organism requires a set of instructions for specifying its traits. Heredity is the passage of these instructions from one generation to the other.

B. AAAS Benchmarks for Science Literacy

Grades 3-5:

The Living Environment

• Heredity

- » some likenesses between children and parents, such as eye color in human beings, or fruit or flower color in plants, are inherited.

Grades 6-8:

The Human Organism

• Human Identity

- » human beings have many similarities and differences.

Additional Resources

Visit the Learn.Genetics website to get links to great resources like these! Just log-in as a teacher and click on *The Basics and Beyond*.

- **Tour of the Basics:** An animated tutorial that contains background information on DNA, genes, patterns of inheritance and more!
- **Inherited Human Traits: A Quick Reference:** A pictorial reference and description of inheritance, and inheritance patterns (dominant, recessive, sex-linked, polygenic) for several human traits, including those listed in this activity.

Credits

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Bingo Questions

You may ask the questions in order, at random, or have students draw numbers.

1. Color the square marked *I cross my right thumb over my left when I clasp my hands* if this describes you.
2. Color the square marked *Shared trait-Left* if you share a trait with the person sitting to your left.
3. Color the square marked *Least common trait* if you have a trait that not many people in the class share.
4. Color the square marked *Neighbor can not taste PTC* if you sit next to someone who can not taste PTC.
5. Color the square or squares naming the relatives from whom you **do not** inherit traits
6. Color the square or squares naming the relatives from whom you **do** inherit traits
7. Color the square marked *I have allergies* if you have this trait.
8. Color the square marked *Trait in common - Right* if you and your neighbor to the right share a common trait.
9. Find the two squares for tasting, or not tasting, PTC and color the one that applies to you.
10. Find the two squares describing earlobes and color the one that applies to you.
11. Color the square marked *Straight hairline* if you have this trait.
12. Color the square marked *Can not roll tongue* if you have this trait.
13. Color the square marked *I have a different trait than the person sitting next to me* if this describes you.
14. Find the two squares describing hair texture and color the one that applies to you.
15. Color the square marked *Freckles* if you have this trait.
16. Color the square marked *Dimples* if you have this trait.
17. Color the square marked *Cleft chin* if you have this trait.
18. Color the square marked *I cross my left thumb over my right when I clasp my hands* if this describes you.

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Preguntas del Bingo Bingo Questions

*Puede hacer las preguntas en orden, al azar o hacer que sus alumnos escojan un número.
You may ask the questions in order, at random, or have students draw numbers.*

1. Colorea el cuadro marcado “Cruzo mi pulgar derecho sobre el izquierdo cuando entrelazo mis manos” si tu haces esto.
1. Color the square marked “I cross my right thumb over my left when I clasp my hands” if this describes you.
2. Colorea el cuadro marcado “Rasgo compartido – izquierda” si compartes un rasgo con la persona sentada a tu izquierda.
2. Color the square marked “Shared trait-Left” if you share a trait with the person sitting to your left.
3. Colorea el cuadro marcado “Rasgo menos compartido” si tienes un rasgo que no mucha gente tiene en el salón de clases.
3. Color the square marked “Least common trait” if you have a trait that not many people in the class share.
4. Colorea el cuadro marcado “Mi vecino no siente el sabor de la FTC” si estas sentado junto a alguien que no siente el sabor de la FTC.
4. Color the square marked “Neighbor can not taste PTC” if you are sitting next to someone who can not taste PTC.
5. Colorea el cuadro o los cuadros que nombran a parientes de los cuales tu NO heredaste rasgos.
5. Color the square or squares naming the relatives from whom you do not inherit traits.
6. Colorea el cuadro o los cuadros que nombran a parientes de los cuales tu SI heredaste rasgos.
6. Color the square or squares naming the relatives from whom you do inherit traits.
7. Colorea el cuadro marcado “Tengo alergias” si tu tienes este rasgo.
7. Color the square marked “I have allergies” if you have this trait.
8. Colorea el cuadro marcado “Rasgo común – derecha” si tú y tu vecino de la derecha comparten un rasgo en común.
8. Color the square marked “Trait in common - Right” if you and your neighbor to the right share a common trait.

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Preguntas del Bingo Bingo Questions

9. Encuentra los dos cuadros marcados “Siente el sabor del a FTC” o “No siente el sabor del a FTC” y colorea el que aplique a tu persona.

9. *Find the two squares for tasting, or not tasting, PTC and color the one that applies to you.*

10. Encuentra los dos cuadros describiendo los lóbulos de las orejas y colorea el que aplique a tu persona.

10. *Find the two squares describing earlobes and color the one that applies to you.*

11. Colorea el cuadro marcado “Rayita recta” si tú tienes este rasgo.

11. *Color the square marked “Straight hairline” if you have this trait.*

12. Colorea el cuadrado marcado “No puede enrollar la lengua” si tú tienes este rasgo.

12. *Color the square marked “Can not roll tongue” if you have this trait.*

13. Colorea el cuadrado marcado “Tengo un rasgo diferente al de la persona sentada junto a mi” si esto te describe.

13. *Color the square marked “I have a different trait than the person sitting next to me” if this describes you.*

14. Encuentra los dos cuadros describiendo textura de cabello y colorea el que aplique a tu persona.

14. *Find the two squares describing hair texture and color the one that applies to you.*

15. Colorea el cuadro marcado “Pecas” si tú tienes este rasgo.

15. *Color the square marked “Freckles” if you have this trait.*

16. Colorea el cuadro marcado “Hoyuelos” si tú tienes este rasgo.

16. *Color the square marked “Dimples” if you have this trait.*

17. Colorea el cuadro marcado “Barba partida” si tú tienes este rasgo.

17. *Color the square marked “Cleft chin” if you have this trait.*

18. Colorea el cuadrado marcado “Cruzo mi pulgar izquierdo sobre el derecho cuando entrelazo mis manos” si tú tienes este rasgo.

18. *Color the square marked “I cross my left thumb over my right when I clasp my hands” if this describes you.*

Name _____

Date _____

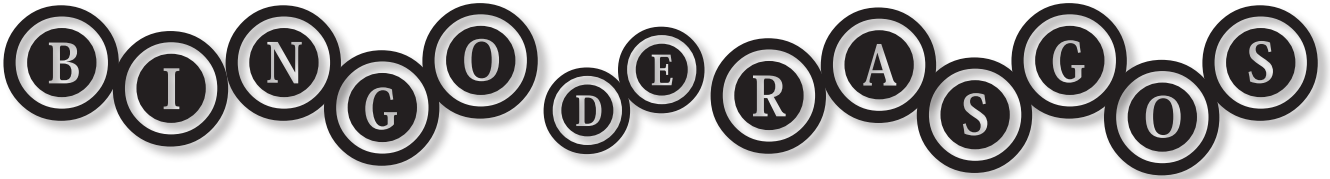
TRAITSBINGO

Color or mark with an "x" the squares below **when instructed to do so**
The square marked "free" is a free space

B	I	N	G	O
Aunt	I have allergies	Straight hairline	Freckles	Mother
I cross my right thumb over my left when I clasp my hands	Can not taste PTC	Curly hair	Neighbor can not taste PTC	Straight hair
Father	Grandmother	Free	Attached earlobes	Dimples
I have a different trait than the person sitting next to me	Cleft chin	Can taste PTC	Uncle	Can not roll tongue
Detached earlobes	Shared trait - Left	Trait in common - Right	I cross my left thumb over my right when I clasp my hands	Least common trait

Name _____

Date _____



Colorea o marca con una "X" los cuadrados que están debajo **cuando se te indique**.
El cuadro marcado "Libre" es un espacio Libre

B	I	N	G	O
Tia	Tengo alergias	Rayita recta	Pecas	Madre
Cruzo mi pulgar derecho sobre el izquierdo cuando entrelazo mis dedos	No siento el sabor de la FTC	Cabello rizado	Mi vecino no siente el sabor de la FTC	Cabello lacio
Padre	Abuela	Libre	Lóbulos pegados	Hoyuelos
Tengo un rasgo diferente al de la persona sentada junto a mi	Barba partida	Siento el sabor de la FTC	Tío	No puedo enrollar la lengua
Lóbulos separados	Rasgo compartido - izquierda	Rasgo común - derecha	Cruzo mi pulgar izquierdo sobre el derecho cuando entrelazo mis dedos	Rasgo menos compartido