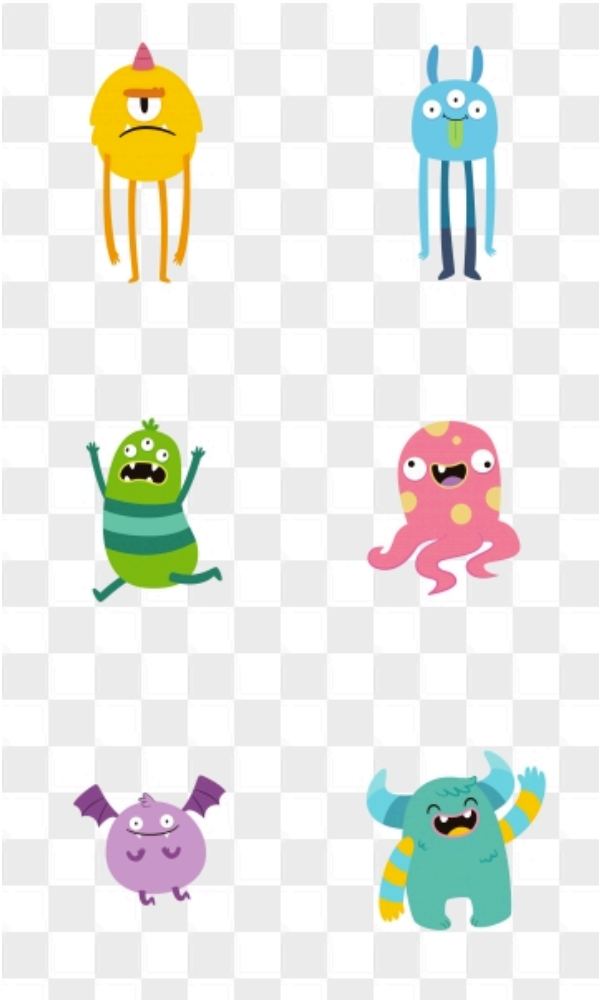
Mino

The cooperative strategy game about amino acids

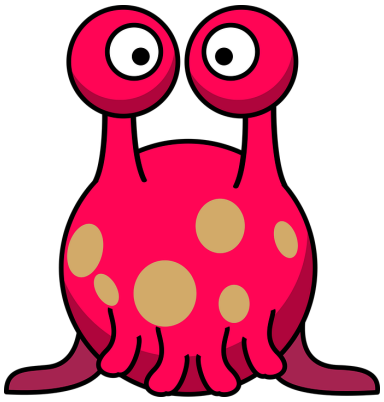
High Concept / Mood Board

Colorful cartoon slime creatures

“I would want a plushie of this character”



Exotic but not scary



Concept Art


zzz


TRYPTOPHAN
-CRACKS, ALMOST LIKE DRIED MUD
zzz


SERINE
• WATERY
• DRIPPY

Tryptophan

AROMATIC

LARGE

SEROTONIN SYNTHESIS

If this card is spent or discarded, increase temperature by 1°

Art style

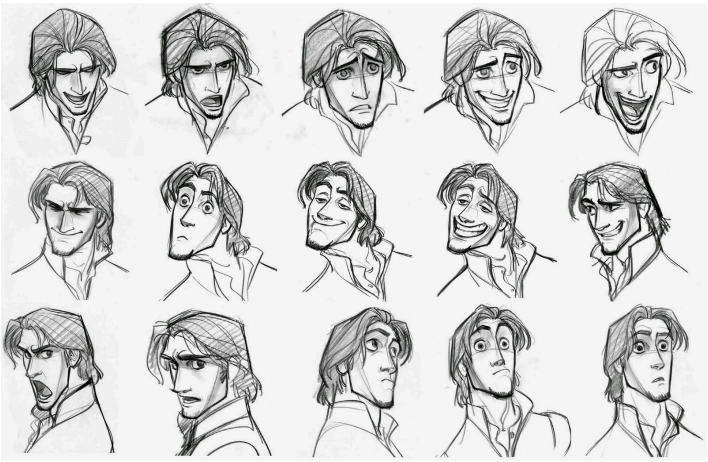
Noticeable outline

Emphasized shadows and highlights for bubbly slime texture

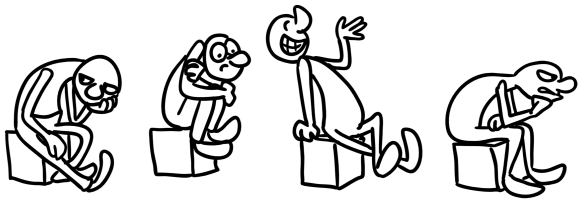
Enlarged proportions for cuteness

Character art

Exaggerated expressions



Poses express character personality, often a shot of them in action doing what they do most, used as a “profile picture”



Minimal attention to arms/legs where applicable (limbs optional except when specified)

Level of Detail

Minimal detail except to highlight key Quirks

Cartoon abstraction

Color Palette

Mood: Colorful, cartoonish, vibrant, cute

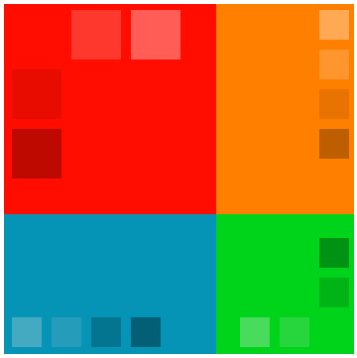
Colors have not yet been decided, 2 proposed color scheme options, but open to artist's interpretation.

DO NOT USE: Pure (100%) red, blue, yellow, or gray -- these are reserved for Structure cards (oxygen, nitrogen, sulfur, carbon)

OPTION 1

Color	Hex	RGB
	#ea4f5e	(234,79,94)
	#f6c348	(246,195,72)
	#40e7b9	(64,231,185)
	#4f73f4	(79,115,244)
	#da65f9	(218,101,249)

OPTION 2:
http://paletton.com/#uid=7020x0kxkC+lnH0qjE8Dgt6FfnG

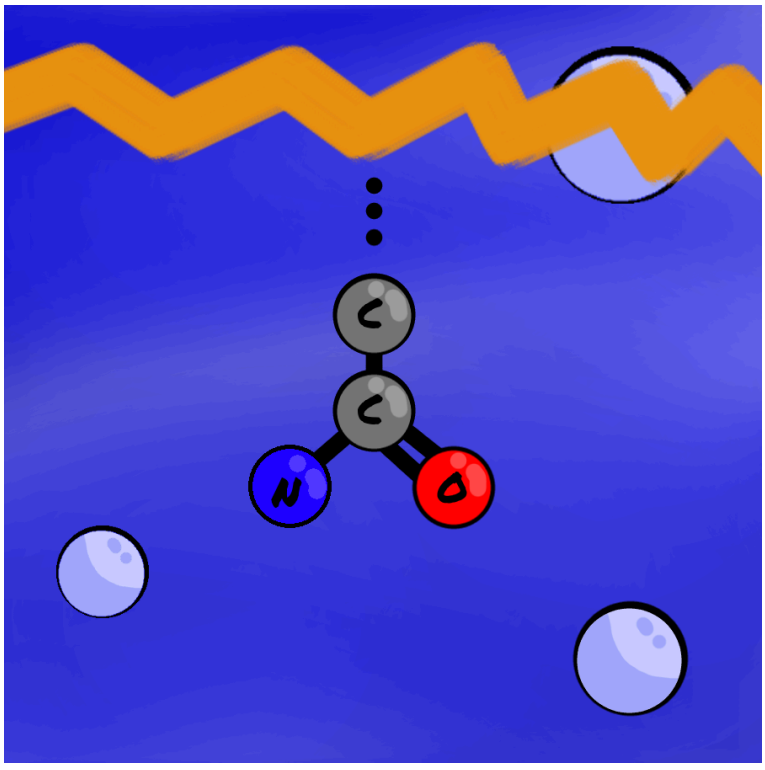


Structures

Carbon	Gray
Sulfur	Yellow
Oxygen	Red
Nitrogen	Blue

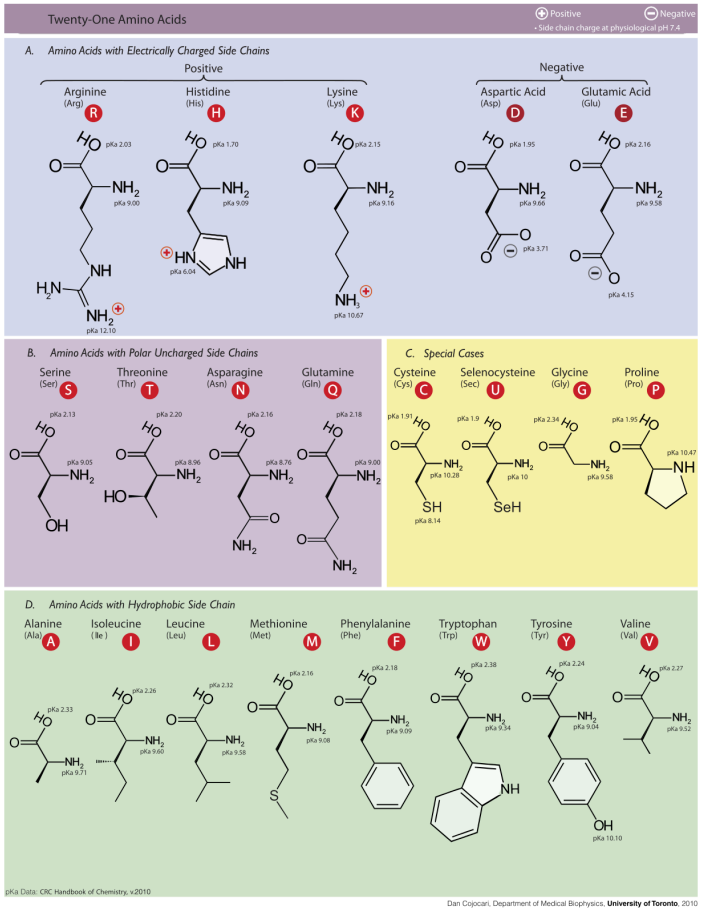
Two sets of structure cards:

Simplified



(asparagine)

Traditional



Roles

- Gamer
- Mentor
- Beginner
- Student

Simple icons, retain cartoon/cute/colorful aesthetic

Gamer, student, mentor, beginner example icons

< Japanese Beginner icon

Characters

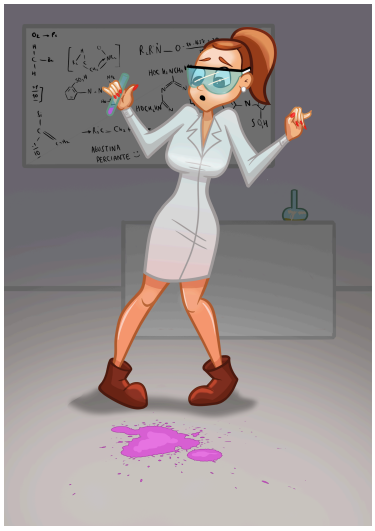
Human characters, ~3x taller/thinner than Mino characters; thinner proportions to indicate these are different (more adult-like) population from Mino creatures

Cool Professor - female professor; ice and wind
Why?: *The professor is wise and therefore calm under pressure; their ability lets them decrease the temperature and keep the protein stable*


Banker - professional businesswoman
Why?: *The banker is a play on an actual banker*

First-year - clumsy, naive student

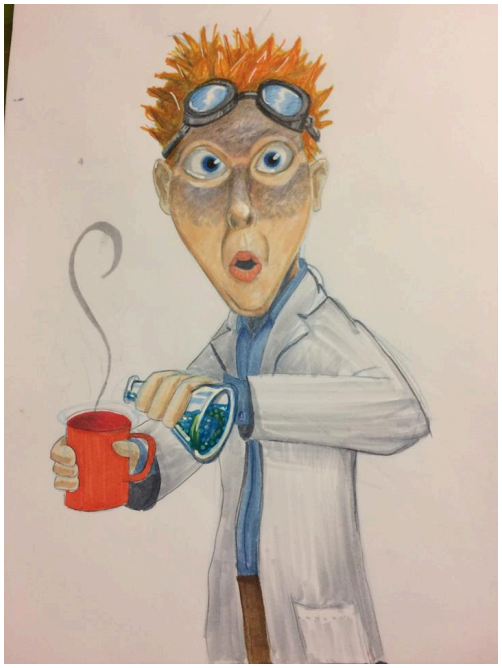
Why?: *The student is inexperienced and prone to making mistakes; their ability lets them take advantage of those mistakes as a learning opportunity*



Denaturalist - volatile fiery happy mad male scientist

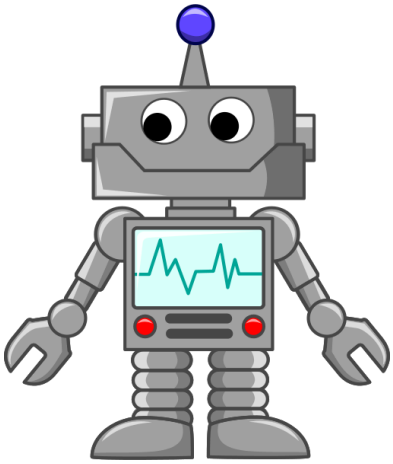
Why?: *The denaturalist is a highly risk/reward centered character who enjoys risking instability at the potential for great reward - they do this by increasing the temperature*

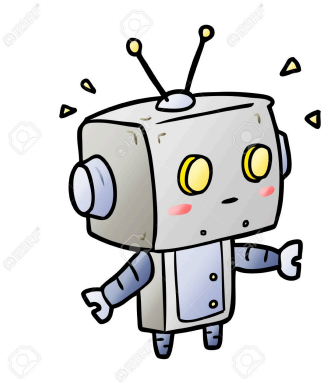
Scientist - curious experimenting scientist mixing test tubes as they explode in their face
Why?: *The scientist isn't afraid to take risks if it leads to discoveries; their ability lets them capitalize on temperature increases to gain new information*

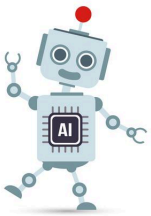


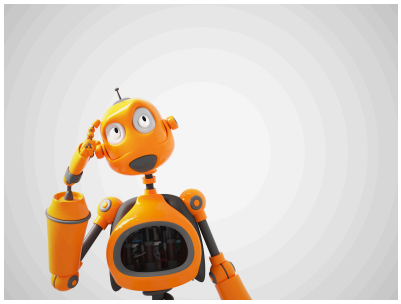
Robot - anthropomorphic robot analyzing data

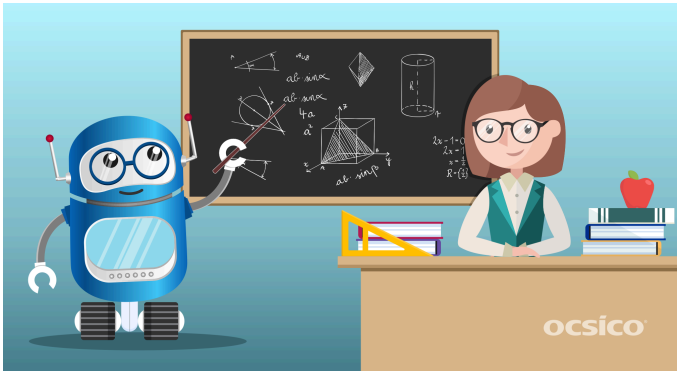
Why?: *The robot represents artificial intelligence; their ability lets them pass their turn to "process data" and reorganize cards*











Packer - heavyset man fitting boxes of different sizes together, neatly organizing them like Tetris

Why?: *The packer represents the idea of "packing" proteins together (like packing a snowball or packing for a vacation), making the most efficient use of space while keeping things compact without causing friction*

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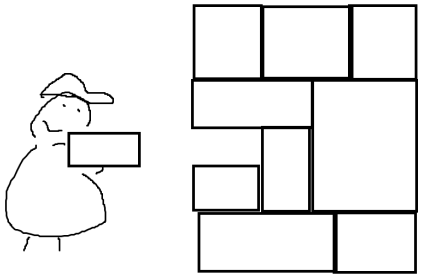
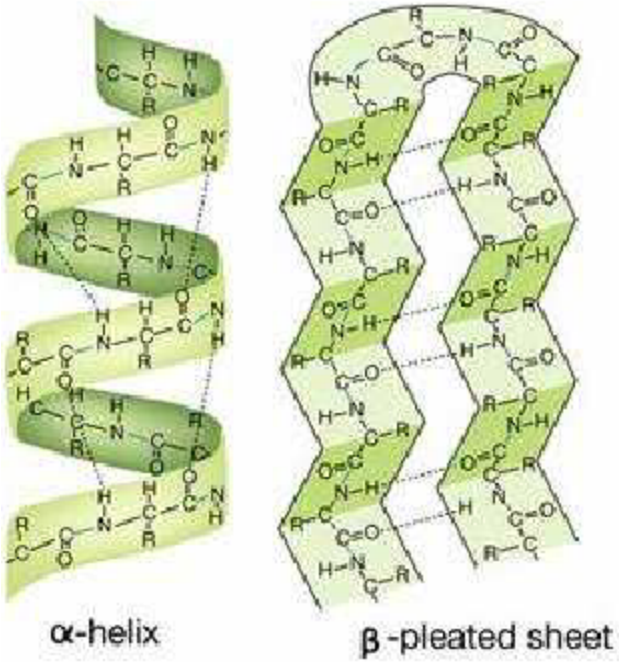


Electrician - female electrical engineer at work (putting wires together to cause a spark; making a battery, etc)

Why?: *The electrician represents the fact that positives and negatives are attracted to each other and negative/negative or positive/positive are repulsed; their ability capitalizes on this to make the protein more stable*

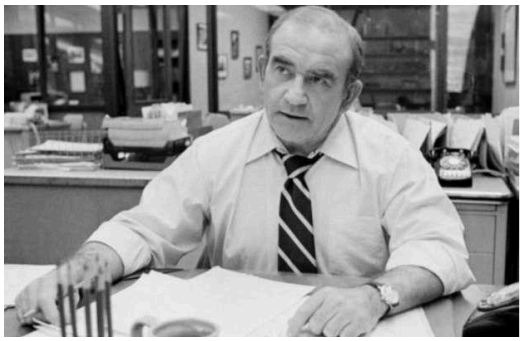
Structuralist - scientist whose limbs twist into helices and zig zag

Why?: *This character represents* ***helices*** *and* ***sheets****, pictured below. These are two of the common ways proteins "fold" into structures; the structuralist's ability represents these 3D interactions*



Editor - newspaper editor with glasses, closely examining a paper

Why?: *The editor is a play on protein editing; their ability lets them "cut and paste"*

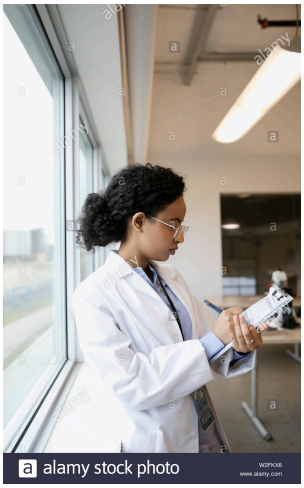


Catabolizer - a happy, hungry fat cat

Why?: *The catabolizer is a play on the word "cat", but catabolism is the process of breaking down proteins to reuse the materials, like recycling; this hungry cat's ability lets them reclaim something from the discard pile at the cost of making the protein less stable*

Researcher - calm, thoughtful female scientist with a clipboard

Why?: *The researcher takes time to gather information; their ability lets them pass their turn to reveal more of the board*



Quirks

The fundamentally most important part of the entire style guide

Why?: *Quirks represent the actual properties of the amino acids, key information for the game*

Quirks are **CONSISTENT**: multiple minos will share the same quirks and they need to be immediately recognized as the same property

Example: These characters all have the "Guy" quirk, shown by their white mask and black eyes

Quirk	Nickname (Old)	Count	Aesthetic	Why?
Aliphatic	Fiery	4	Fiery, volatile, this character has no rings	Aliphatic compounds, like fuels, are often flammable. Aliphatic is mutually exclusive with aromatic, which has rings.
Small	Small	4	Tiny, fidgety, submissive, crouched, scared	Self-explanatory - this amino acid is physically smaller
Branched	BCAA	3	Tree branches for limbs	Branched-chain amino acids have a forked/branching

				structure, as opposed to other amino acids that are more linear
Alkyl	Gas (formerly Dry)	5	Orange gas	Alkyl groups are found in methane, butane, and propane - gases
Glucogenic	Sweet	5	Sugary, sweet, fat	Glucogenic means produces sugar
Ketogenic	Skinny	2	Skinny, starved, unsweet	Ketogenic is the opposite of Glucogenic
Sulfur	Smoky	2	Yellow, smoky	Sulfur is yellow and smoky
Nonpolar	Dry (formerly Balanced)	10	dry cracked skin(?), warm palette, balanced	Unlike blue "wet" minos that want to be near water, these minos want to avoid water. These minos are balanced because they don't have a polar charge which unbalances them (like "wet" minos)
Aromatic	Smelly	3	Smelly, lots of rings/circles, glittery	These minos literally have an aroma. The physical shape of these minos includes rings. Aromatic amino acids are also fluorescent, hence the glitter
polar	Wet	5	Water, blue, off-balance	Unlike orange "dry" minos that want to avoid water, these minos want to be near water. These minos are off-balance because of their polar charge, both attracting them to water and making them unstable
amide	Tough	2	Resilient, strong, tough	These minos are found in resilient materials like nylon and kevlar
hydroxyl	Watery	2	Made of water, dripping wet	Hydroxyl groups are literally an Oxygen and Hydrogen (OH!), so this is a kind of wordplay; but also, hydroxyl radicals are very reactive

acidic/negative	Sad	2	Sad, angry	These minos are negatively charged
basic/positive	Happy	3	Happy, calm	These minos are positively charged
Charged	Charged	5	electric	These minos carry an electrical charge, either positive or negative
Large	Big	6	Large, powerful	Self-explanatory - this amino acid is physically larger
Donor	Kind	8	Generous, helpful; they extend something blue	These minos donate a hydrogen to form a bond with their neighbor.
Acceptor	Open	7	Accepting, grateful; they extend something red	These minos accept a hydrogen to form a bond with their neighbor.
Essential		9	Two human-like cartoon hands (i.e. 4 fingers)	This mino cannot be made by a human body
Conditionally Essential		6	One human-like cartoon hand (i.e. 4 fingers)	This mino is sometimes made by a human body
Nonessential		5	No human-like hands (may have stub arms or hold things without limbs)	This mino can be made by a human body

Minos

ALL CAPS = UNIQUE FEATURE
<u>These features are open to suggestion as long as they satisfy the Why below</u>

NAME: Each Mino also has a Letter name tag visible somewhere on their body or like a tattoo (written in this guide next to their name)

Social: For the purpose of non-card art, the Mino's friends are described so they can be drawn with who they hang out with

Glycine, G

Quirks	**Aesthetic**
Slightly Non-polar	Warm color palette
Alkyl	Orange gas
Small	Tiny
Conditionally essential	One human-like cartoon hand (i.e. 4 fingers)
AMBIVALENT	SWIMMING

Why?: *Glycine is happy to be anywhere, even near water.*
Social: Glycine is a social butterfly

Proline, P

Quirks	**Aesthetic**
Slightly Non-polar	Warm color palette
Conditionally essential	One human-like cartoon hand (i.e. 4 fingers)
DOUBLE BIND	STANDING ON A GIRDER THAT THEY BEND WITH THEIR FEET (?)

Why?: *Proline is the only amino acid that connects to the backbone twice, which creates "kinks" in the structure*
Social: Proline is a loner

Alanine, A

Quirks	**Aesthetic**
Slightly Non-polar	Warm color palette
Alkyl	Orange gas
Small	Tiny, fidgety, submissive, crouched, scared
Nonessential	No human-like cartoon hands
Aliphatic	Fiery, volatile, this character has no rings
AMBIVALENT	SURFING

Why?: *Alanine is ambivalent to water and doesn't mind interacting with the parts of the protein that get wet, whereas most non-polar amino acids don't want to be exposed to water.*

Social: Alanine is a social butterfly.

Valine, V

Quirks	**Aesthetic**
Slightly Non-polar	Warm color palette
Alkyl	Orange gas
Essential	Two human-like cartoon hands (i.e. 4 fingers)
Aliphatic	Fiery, volatile, this character has no rings
Branched	Tree branches for limbs
SHORT BRANCH	BODY SHAPE LIKE A LOWERCASE r

Why?: *Valine's body shape comes from its chemical structure.*
Social: Valine hangs out with Leucine and Isoleucine

Leucine, L

Quirks	**Aesthetic**
Slightly Non-polar	Warm color palette
Alkyl	Orange gas
Essential	Two human-like cartoon hands (i.e. 4 fingers)
Ketogenic	Skinny
Aliphatic	Fiery, volatile, this character has no rings
Branched	Tree branches for limbs
MEDIUM BRANCH	BODY SHAPE LIKE A SIDEWAYS T

Why?: *Leucine's body shape comes from its chemical structure.*
Social: Leucine hangs out with Valine and Isoleucine

Isoleucine, I

Quirks	**Aesthetic**
Slightly Non-polar	Warm color palette
Alkyl	Orange gas
Essential	Two human-like cartoon hands (i.e. 4 fingers)
Glucogenic	Fat
Aliphatic	Fiery, volatile, this character has no rings
Branched	Tree branches for limbs
LONG BRANCH	BODY SHAPE LIKE AN UPSIDE DOWN L

Why?: *Isoleucine's body shape comes from its chemical structure.*
Social: Isoleucine hangs out with Valine and Leucine.

Phenylalanine, F

Quirks	**Aesthetic**
Non-polar	Warm color palette
Aromatic	Smelling flowers, wears jewelry and perfume, glittery
Essential	Two human-like cartoon hands (i.e. 4 fingers)
Glucogenic	Sweet and fat
Large	Large
TYROSINE SYNTHESIS	SWEET OLD WOMAN

Why?: *Phenylalanine produces Tyrosine, so she's depicted as his mother.*
Social: Phenylalanine hangs out with her son Tyrosine.

Tryptophan, W

Quirks	**Aesthetic**
Non-polar	Warm color palette
Aromatic	Has a visible odor from him, wears big hoop earrings, round face
Essential	Two human-like cartoon hands (i.e. 4 fingers)
Glucogenic	Sweet and fat
Large	Quite large, in fact the largest Mino; body is roughly the shape of two big rings
Donor	holding a bright blue teddy bear and wearing a blue nightcap
SEROTONIN SYNTHESIS	SLEEPY/ASLEEP

Why?: *Tryptophan produces serotonin, which is associated with sleep*
Social: No social bonds in particular, but not a loner. Relates closest to Phenylalanine and Tyrosine.

Serine, S

Quirks	**Aesthetic**
Polar	Wet, off-balance
Nonessential	No human-like cartoon hands (i.e. 4 fingers)
Hydroxyl	Made of water, dripping wet
Small	Small, fidgety, crouched, scared
Donor/Acceptor	Has two antennae, one with a red bulb at the end and the other with a blue bulb at the end

Social: Hangs out with Tyrosine and Threonine.

Tyrosine, Y

Quirks	**Aesthetic**
Slightly non-polar	Warm color palette
Slightly polar	off-balance
Conditionally essential	One human-like cartoon hand (i.e. 4 fingers)
Glucogenic	Fat and sweet
Hydroxyl	Made of water, dripping wet
Large	Large
Donor/Acceptor	Has two antennae, one with a red bulb at the end and the other with a blue bulb at the end
DOPAMINE SYNTHESIS	VERY JOYFUL AND PLAYFUL

Why?: *Dopamine is linked with pleasure and addiction*
Social: Hangs out with Serine and Threonine.

Threonine, T

Quirks	**Aesthetic**
Polar	Wet, off-balance
Essential	Two human-like cartoon hands (i.e. 4 fingers)
Hydroxyl	Made of water, dripping wet
Glucogenic	Sweet and fat
Donor/Acceptor	Has two antennae, one with a red bulb at the end and the other with a blue bulb at the end
LAST TO THE PARTY	RUNNING LATE

Why?: *Threonine was the last amino acid to be discovered.*
Social: Hangs out with Serine and Tyrosine, when he catches up.

Cysteine, C

Quirks	**Aesthetic**
Slightly non-polar	Warm color palette
Sulfur	Yellow smoke
Small	Small, crouched
Conditionally essential	One human-like cartoon hand (i.e. 4 fingers)
DISULFIDE BRIDGE	TWO TWIN CYSTEINES ARE TOGETHER AND FORM A SMOKY YELLOW BRIDGE BETWEEN THEM

Why?: *Cysteine's sulfur bonds with itself and forms a very strong connection.*
Social: Hangs out with another Cysteine to form their bond.

Methionine, M

Quirks	Aesthetic
Slightly non-polar	Warm color palette
Sulfur	Yellow smoke
Large	Large
Essential	Two human-like cartoon hands (i.e. 4 fingers)
START CODON	WAVING A GREEN FLAG

Why?: *Methionine marks the start of transcribed mRNA,*
Social: Social butterfly, helpful. "Mom friend" vibes

Aspartic Acid/Aspartate, D

Quirks	Aesthetic
Acceptor	Something extended red
Acidic	Sad, angry
Charged	Electrical sparks
Nonessential	No human-like cartoon hands (i.e. 4 fingers)

Social: Hangs out with Glutamate. Has an "opposites attract" relationship with Lysine, Arginine, and Histidine.

Lysine, K

Quirks	**Aesthetic**
Donor	Something extended blue
Basic	Happy, calm
Charged	Electrical sparks
Ketogenic	Skinny
Large	Large
Essential	Two human-like cartoon hands (i.e. 4 fingers)

Social: Hangs out with Arginine and Histidine. Has an "opposites attract" relationship with Aspartate and Glutamate.

Arginine, R

Quirks	**Aesthetic**
Donor	Something extended blue
Basic	Happy, calm
Charged	Electrical sparks
Large	Large
Conditionally essential	One human-like cartoon hand (i.e. 4 fingers)

Social: Hangs out with Lysine and Histidine. Has an "opposites attract" relationship with Aspartate and Glutamate.

Glutamic Acid/Glutamate, E

Quirks	**Aesthetic**
Acceptor	Something extended red
Acidic	Sad, angry
Charged	Electrical sparks
Nonessential	No human-like cartoon hands (i.e. 4 fingers)
GABA SYNTHESIS	FLOWERS DYING AROUND HIM

Why?: *Glutamate creates GABA which is an inhibitor in the brain, preventing neurons becoming active.*
Social: Hangs out with Aspartate. Has an "opposites attract" relationship with Lysine, Arginine, and Histidine.

Asparagine, N

Quirks	**Aesthetic**
Polar	Wet, off-balance
Amide	Tough armor
Donor/Acceptor	Has two antennae, one with a red bulb at the end and the other with a blue bulb at the end
Nonessential	No human-like cartoon hands (i.e. 4 fingers)
FOODIE	EATING A TON OF ASPARAGUS

Why?: *Asparagine and Aspartate are named after asparagus. Asparagine is also involved in getting energy from food.*
Social: Loves sharing food with Aspartate.

Glutamine, Q

Quirks	**Aesthetic**
Polar	Wet, off-balance
Amide	Tough armor
Donor/Acceptor	Has two antennae, one with a red bulb at the end and the other with a blue bulb at the end
Conditionally essential	One human-like cartoon hand (i.e. 4 fingers)
ABUNDANT REGULATOR	BODYGUARD, EVERYWHERE AT ONCE

Why?: *This Mino is everywhere and keeps things stable and regulated.*
Social: Social butterfly.

Histidine, H

Quirks	**Aesthetic**
Aromatic	Smelling flowers, glittery
Acceptor/Donor	Has two antennae, one with a red bulb at the end and the other with a blue bulb at the end
Basic	Happy, calm
Charged	Electrical sparks
Essential	Two human-like cartoon hands (i.e. 4 fingers)
INFLAMMATION	SNEEZING

Why?: *Histidine is involved with allergic inflammation.*
Social: Hangs out with Lysine and Arginine. Has an “opposites attract” relationship with Aspartate and Glutamate.

Reference poster

Actual Venn spaces - color/pattern scheme for each quirk, modular so easy to tell when something overlaps with three

TODO return to this when poster space/material has been figured out

Technical guidelines

1. Font must be Brown Bag Lunch
    - https://www.1001fonts.com/brownbaglunch-font.html
2. All files uploaded to Google Drive in the appropriate folders
3. Include PNG and original source (XCF, PSD, etc)
4. Must be exact pixel dimensions as specified
    - All characters must fit within 800x800 px
5. Naming convention: [version/fidelity]_[category]_[name] … examples:
    - Sketch_role_scientist.png
    - beta_mino_leucine.xcf
    - Final_board_aliphatic.psd

Overview of Gameplay

Each player has a deck of face-down cards. The back of the card gives some but not all information. Players **coordinate** to **reveal** cards and place them on the 5x5 grid of tiles, trying to **match** card properties with the tile properties. Reference material tells them what their cards might be so that they can **card count** and **make strategic guesses** about how to use their cards. Players win by filling all tiles with cards or lose by running out of cards of a certain type or making too many bad plays.