

Exciting Ecosystem Design Document

Sara Pavlinek

Research and Ideation

1) Interview with client

- Purpose: Adults in Western PA are more aware of the personal and societal benefits of native plants over a traditional grass-only lawn, and curious about changing their own.

Audubon Society CLIENT INTERVIEW

disassociated →

- people don't understand interconnectedness of food
- our choices as humans impact everything
- pollination → insects disappearing
↳ food chain is dependent on pollinators
- native bees pollinate even during 35° degrees
- messy overgrown field
- social norms → be tidy and neat as possible
- instead → should have overgrown
- individual contributions
- native plant = plant that evolved in western PA
- invasive species - don't
- apartments
- if you have container → grow aster / other flowers
- bees lay eggs in tubes

game context

- adults want to play → are willing
- children - captive audience

resources → Audubon Society

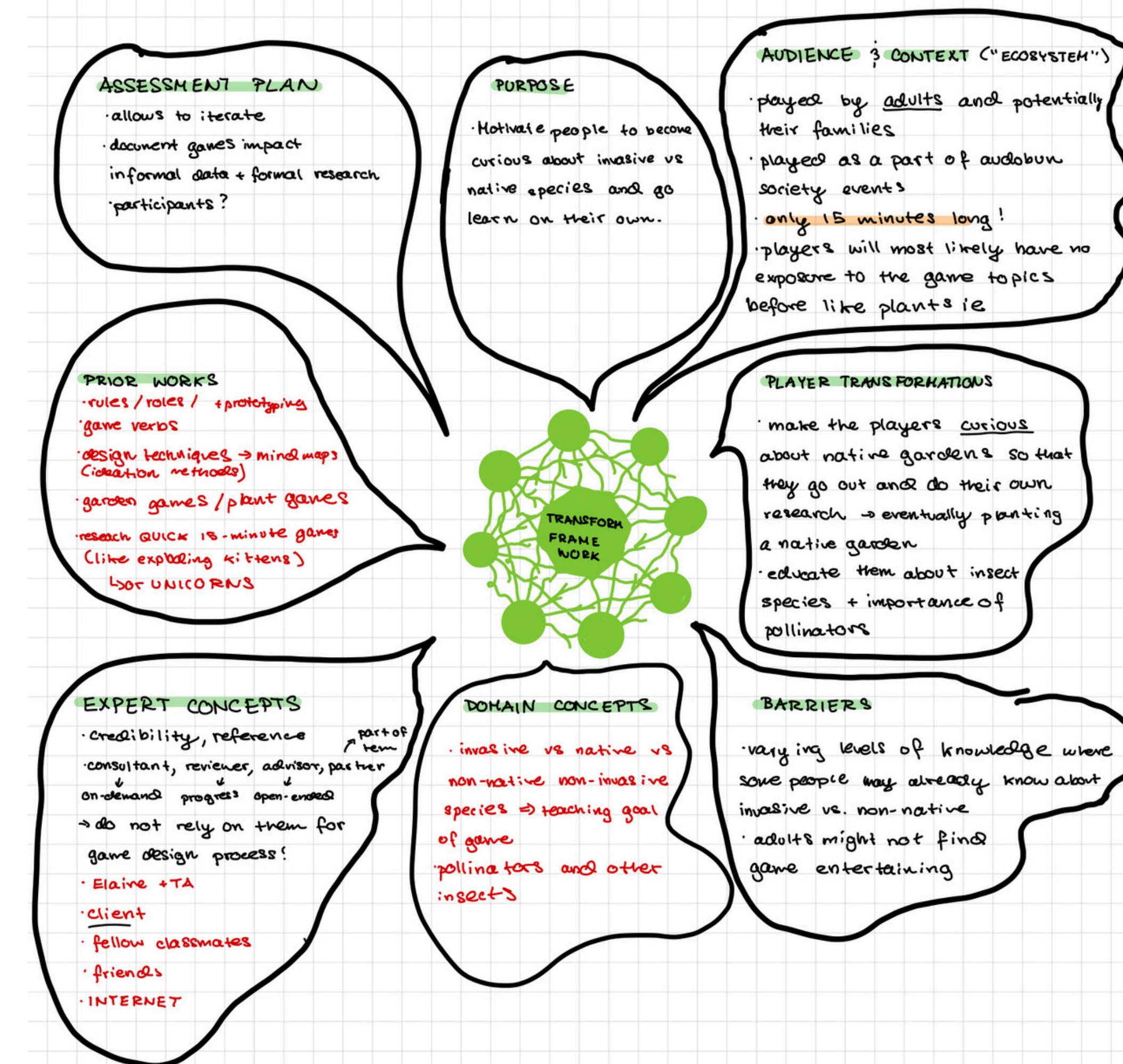
POINT: Adults need to be curious to learn more

- might not know what invasive plants are → teach them
- the problem → invasive (not just non-native)
↳ some non-native plants are good
- game succeeded → audience is motivated to learn more
- current adults engage most with food/medicine → native plants connection

subject is intimidating → people are afraid to plant something
↳ what at state is huge

people know plants / are gardeners

- don't know native vs. invasive
- what makes people more curious?
↳ resource paper
- bird trivia → with alcohol



Research and Ideation

- 2) Research articles on fostering curiosity
 - 3) Find and study games that are minimalist and that are garden related or themed
- SEE THEORY PAPER ON MORE RESEARCH INFO

Key Themes in Fostering Communication and Belonging:

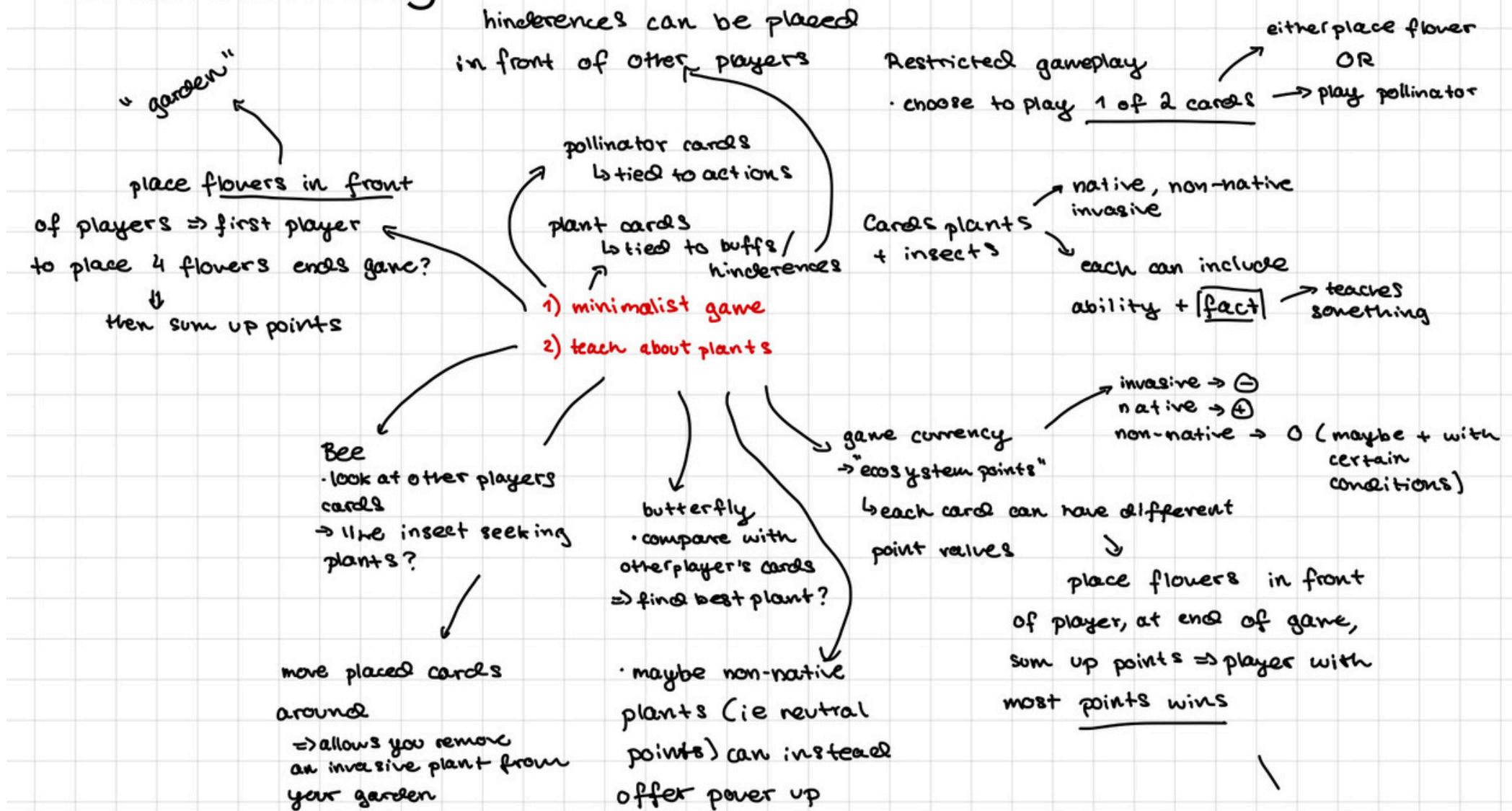
- Curiosity through Uncertainty: Introducing unknown outcomes, hidden information, and unpredictable events can drive players to explore deeper, fostering curiosity and engagement. Uncertainty as a design tool helps players actively seek answers and remain invested in the game's content.
- Empathy as a Curiosity Catalyst: Designing narrative scenarios that encourage players to empathize with characters motivates exploration and deepens player curiosity. Games that incorporate empathy-driven choices help players reflect on social issues and connect emotionally with the game's narrative.
- Design Strategies for Prosocial Outcomes: Embedding mystery elements, empathy-building scenarios, and collaborative tasks can make games effective tools for exploring complex social topics. These design choices not only enhance curiosity but also support prosocial goals by encouraging players to engage with meaningful, real-world themes.

After reading: "Towards a Minimalist design"

- Restrict choices of player to only play 1 of 2 cards
- have a theme, not a full story that needs to be understood
- each turn is only: draw a card + play 1 of 2 cards

Game verbs:
LEARN
WONDER/CURIOS
HAVE FUN

Brainstorming



Minimalist game design

Things I added:

- restrict choices of player to only be play 1 of 2 cards
- have a theme, not a story
- each turn is only: draw a card + play 1 of 2 cards

One Page Design

- guaranteed to be fully studied by audience
- different 1-page designs for different audiences
- client gets different one than designer

Intended Transformations

Moment in the Game	Intended Player Behavior	Observed Behavior	Intended Player Transformation	Researched reason why this works
Player draws new card	Player will read the information on the card, learning something new about the insect/plant	Players tend to focus more on the points -> associate point values with being invasive or native	Foster engagement and learning, making them curious about native/invasive plants	Learning through a game leads to more engagement and better retention of information
Opponent's studying card, deciding what to play	Player will become curious as to what the opponent's card is and what it will do	Player became curious as to what the opponent's card is and what it will do	Foster curiosity and sense of wanting to learn more / see more cards and their actions.	Curiosity through Uncertainty: Introducing unknown outcomes, hidden information, and unpredictable events can drive players to explore deeper, fostering curiosity and engagement.
Player plants plant card into garden	Player will read the information on the card, learning something new about the plant	Players tend to focus more on the points -> associate point values with being invasive or native, and do not really read the blurb at the bottom of the card	Foster engagement and learning, making them curious about native/invasive plants	Learning through a game leads to more engagement and better retention of information
Player plays insect card	Player will read the information on the card, learning something new about the insect	Players focus on the power up, and since the powerup is associated with the blurb about the insect, they do retain information about the insect	Foster engagement and learning, making them curious about native/invasive plants	Learning through a game leads to more engagement and better retention of information

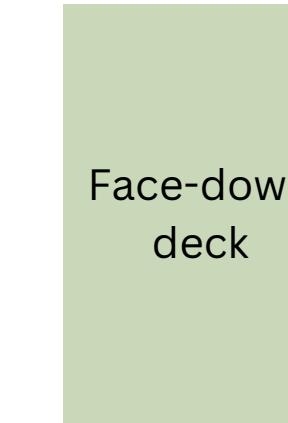
Exciting Ecosystem

PROTOTYPE 1

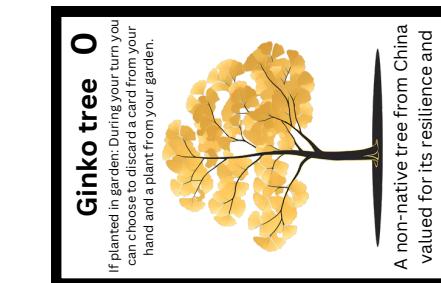
Rules

- On each turn player takes a card from the face-down deck and either:
 - plays an insect card into the discard pile
 - places a plant card into their garden
- 3 types of plant cards
 - native - give + points
 - invasive - give - points
 - non-native - give 0 points but also provide powerup
- The game ends once any player has 4 plants in their garden
- The player with the most “ecosystem points” at the end of the game wins

Native plants give positive points and players should try to plant as many in their garden



Game ends once a player plants **4 plants** in their garden



The space in front of each player is their garden, where they place out plant cards

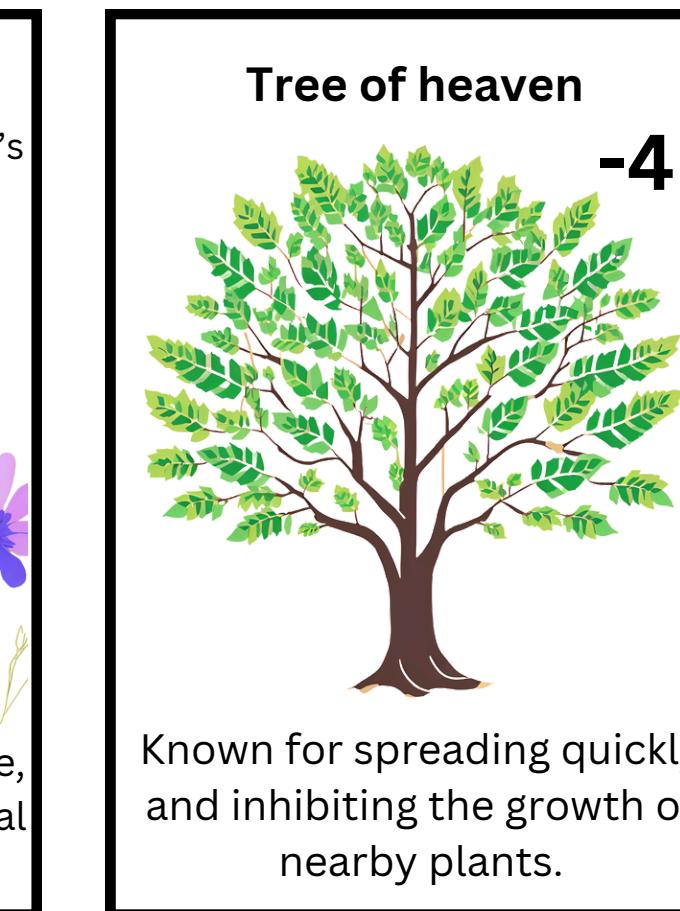
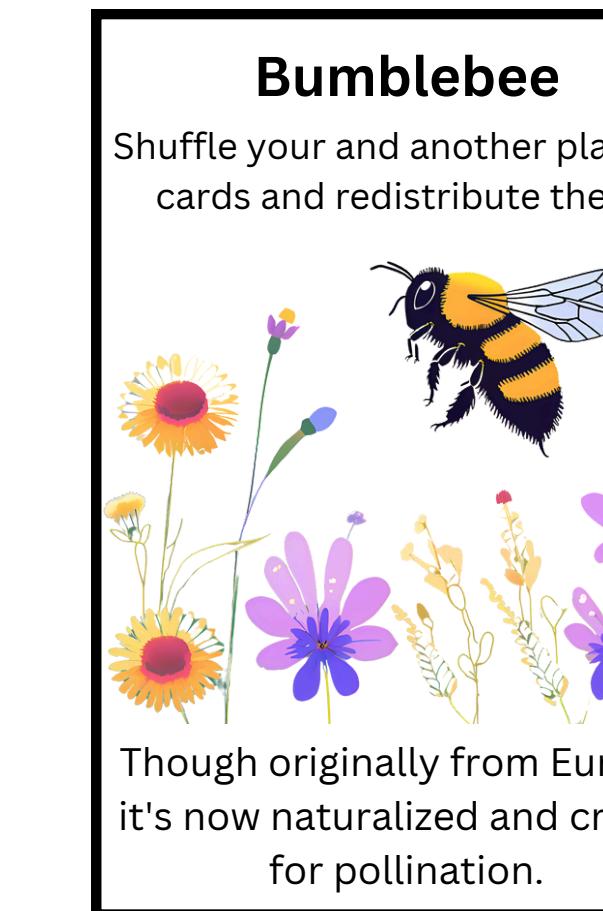
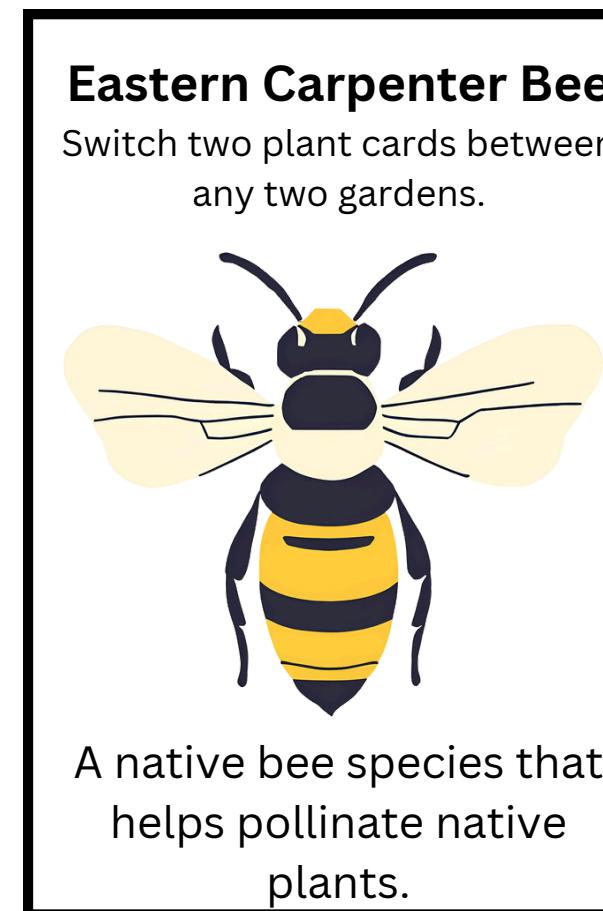
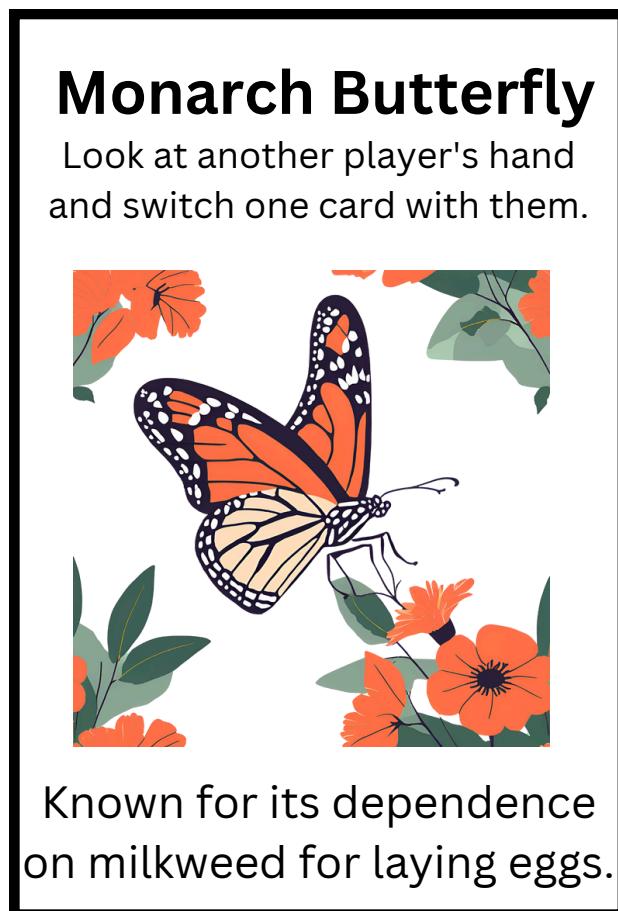
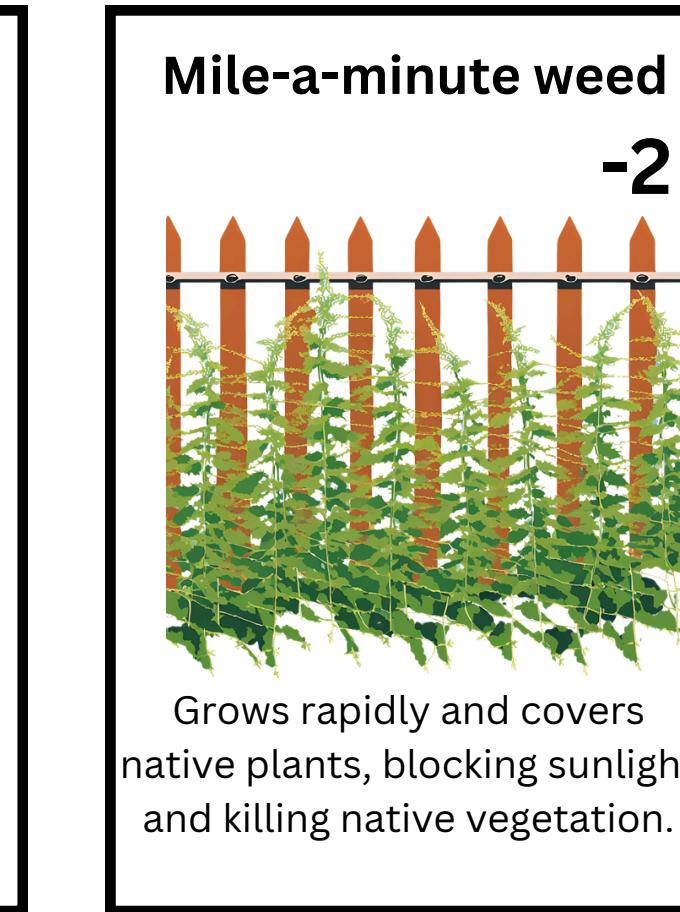
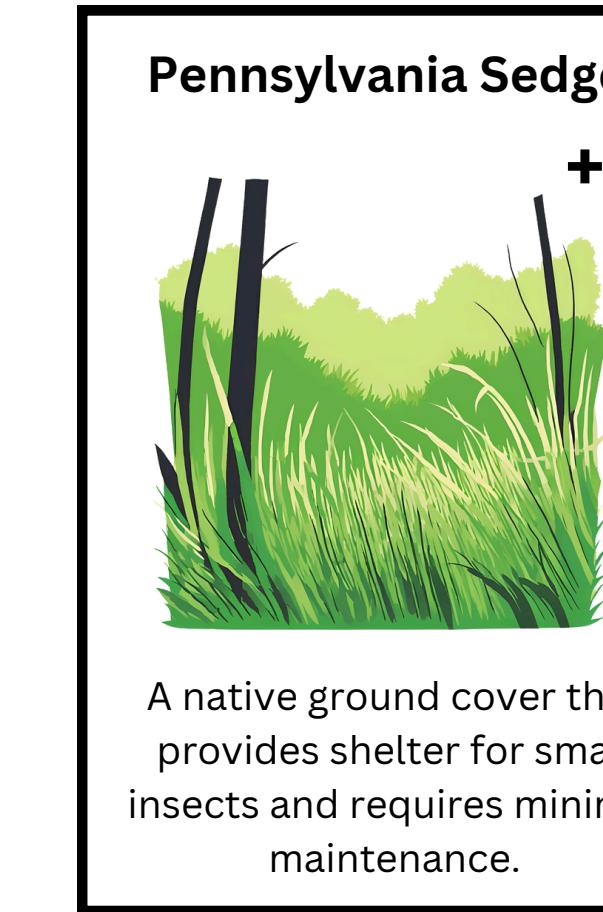
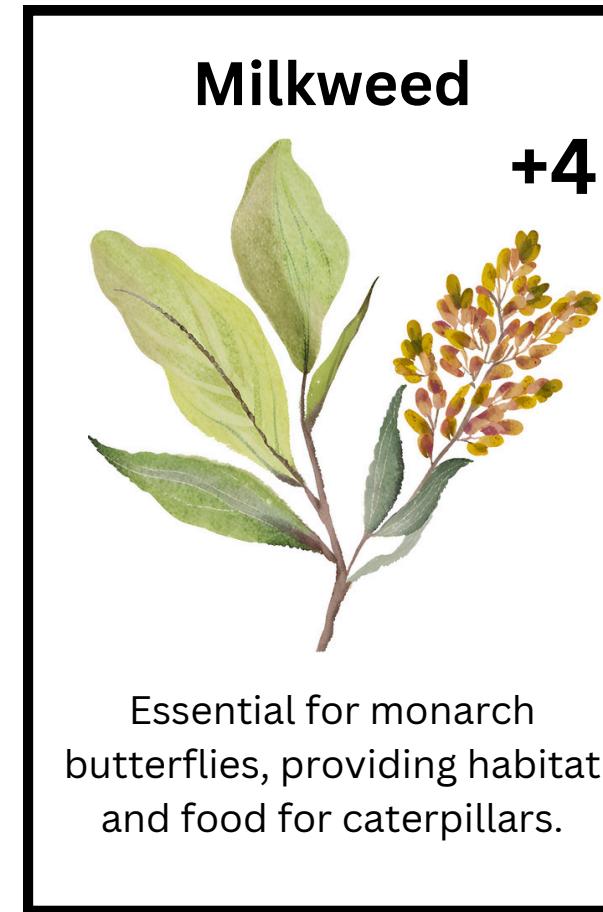
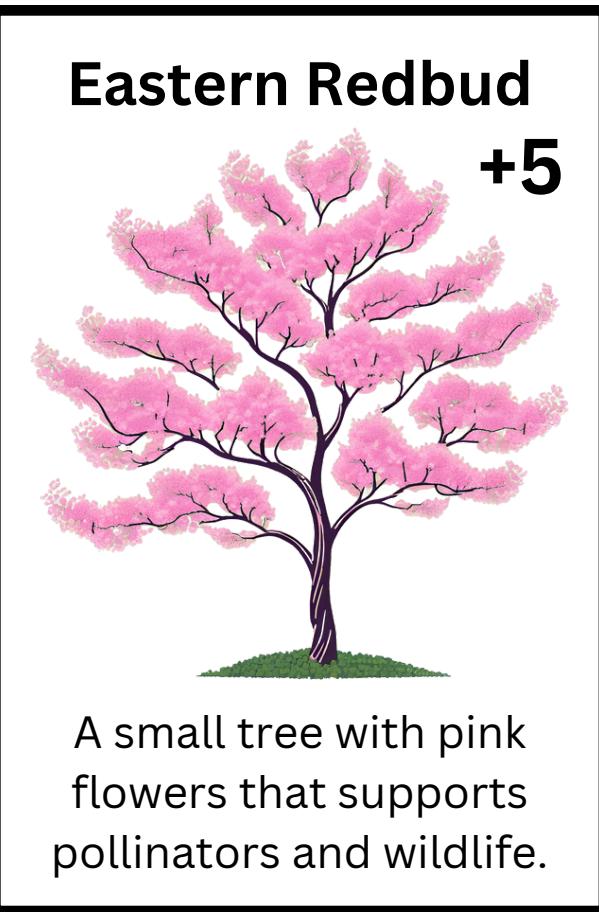
Short fact at the bottom of each card helps educate audience a bit

Non-native plants but not invasive plants provide 0 points, but give the player an ability, such as being able to discard plants from your garden => it is still beneficial to plant non-native plants

The discard pile, where the player plays insect cards that allow them to for example exchange cards with another player.

Description: Garden Guardians is a strategic card game inspired by Unstable Unicorns, where players compete to cultivate the most vibrant and diverse garden using plant and pollinator cards. The game encourages interaction, strategy, and a bit of chaos, as players can influence each other's gardens while building their own.

Prototype 1 cards



Playtest 1 of Prototype 1

Reflection

This playtest was conducted in front of the entire class with two playtesters, so I received a lot of great feedback. The game in two players took around **10-15 minutes**, so the time goal was met. In general, the game balance was off because I had too many insect cards and not enough plant cards. It also seemed that 2 cards per player is too little and the cards need to be more organized as we lay them down in front of us. Questions I was asking myself after the playtest were:

- Should I increase number of cards in hand even though this makes the game less minimalist?
- Is there a way for me to tie power-ups to fun facts about the plants/insects?
- What other plants and insects can I add into the game?

Things I changed going into Prototype 2:

- Added a template garden where they can plant their plants - got a lot of feedback saying the players were confused when the game ended and the cards were messy
- Added more plant types, but left the amount of insects the same - so that game balance is not off
 - Made sure to include more common plant types that are native/non-native since I got a lot of feedback saying that the plants were unknown
- Increased number of cards hand to 3 - got a lot of feedback saying that 2 cards per hand is too little for effective shuffling of cards

• did not read plant names → only looked at points

• was confused about the shuffling cards when there are only 2¹ cards

• said they became curious about non-native vs native plants but would go back at the end of the game

E

• Practitioner had to explain what to do many times

where is the plant garden?

• players may be confused at first, but in the process they figure out how to play the game and understand the rules by communicating and testing laughing and talking,

• Players sometimes were confused when facing the cards,

"users would say ""oh no!"" or ""wow!"" if they get a surprising card

• Playtesters were learning quickly

• Love the pictures on the cards! They are cute! And The game pace is stable and I didn't observe lots of emotional changes from players (may not a bad thing)

• Laughing and being surprised

• Asking clarification questions as to how to use cards,

the designer had some guided strategies

• it isn't clear to the players when the game has ended.

• Players were able to see that negative point plants are bad and did not want to play them

• there is a clear difference of the game flow from the start of the game VS when it has been going on. the flow starts to build pretty quickly and the players hesitate less

to take turns drawing cards from the pile

• "Sometimes the players are confused with whether they can or cannot do something which is not directly stated in the general rule, e.g. ""can I choose to not switch?""

• Players weren't too sure what to do with their cards

• both players ask if they could skip --!

• "Players received input on game strategy, reminders of actions they can take during the turn, and clarification of the game end state."

• Players were confused about when to keep or discard a card.

• "Werent' clear on ""shuffle and redistribute"" as to the action to take."

• Players seemed confused as to the effect their cards would have.

• Play cards to the board in order to cause the game state to change.

• Players were looking for win conditions -> willing to destroy / damage other's gardens.

O

• I would add one role as instructor or gardening expert in the game to read the card and if players get an qa,

they laughed during the process and talked a lot so i think the experience may be happy but somewhat confused as they do not figure out the rules for long time

• "Because one of the players continually got the Monarch Butterfly card, the game balance may be off. There may be too many insect cards."

• the initial confusion may have been because of their unfamiliarity with the game but they quickly were able to grasp the rules after a couple of rounds playing,

• The action on the card might be not very easy to understand in the beginning

• the competitive aspect made them more engaged,

• The game design aligns with some traditional card game core loop-get better card for point and make others worse-so players can easily catch up with what strategies they can do,

• Players were unsure of their cards actions so they played first and thought of the consequences later.

• goals are minimized

• 2 cards per hand may be too little cards to make the shuffle / switch between hand mechanic interesting

• cards interacted with one another in unexpected ways?

• They were confused, not fully understood until the game ended

• The players were unable to parse the instructions on the card as they weren't detailed enough.

• perhaps card balancing was a bit off

• the game has simple mechanics that is easy to follow, draw and pick one of two.

• "the garden metaphor allows the player to have some kind of agency of maintaining and managing their choices"

T

• "to help keep track of the game (give info on when the game has ended, how many cards you can have in hand), i would try to make a template for placing cards that helps show progress of the garden.

• "Like how Mr. Kubiak was saying, there are lots of plants we interact with that are familiar to us. Perhaps including more familiar native plants (strawberries, blueberries) would also help players realize native plants are attractive for reasons beyond aesthetics and sustainability (fruits :D)?

• I will try to see what if we let the players have more cards in hand and whether that influences their experience so that the players can have more flexible

strategies and reduce confusions on functional cards

• I would make the cards bigger clearer and make rules and goals as explicit as possible and more kinds of plants and abilities of these plants,

• "Instead of having equal card sizes of native plants, invasive plants, and insect cards, reduce the amount of insect cards by half to help balance the game"

• "I would give each player more than two cards (maybe 3-5?) so they have more choices to pick from and when shuffling, it would be easier for randomization between the players. i can also see that this may be a small scale version of the game, so potentially scaling the game would help with the randomization factor within the deck"

• "(In addition to previous response) Given that your intention was to peak curiosity about learning about plants too, is there a way you can find fun facts for power ups?

• "I would enhance the metaphor of the garden and create a ""garden grid board(?)"" so the cards look more arranged and would not be easily confused while discarding or playing. Because right now I see stacks of cards lined on the table but don't really know what had happened."

• "I would draw a game board with different zones to put different cards, make it more clear. And I would make some differences between different types of cards."

• I would try to see if you can give like a tiny info sheet telling you like turn order and when the game ends,

• "More cards with more abilities and more variety of plants would be cool, so there is more knowledge share in the game s",

• I would try to place more emphasis on the descriptions of the plants themselves. Is there a way for you to tie power ups back to features of the plants so that players can simultaneously learn and play?"

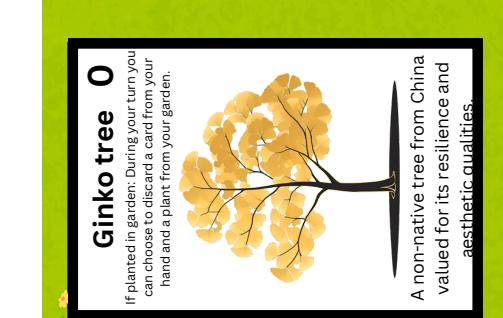
A

Exciting Ecosystem

PROTOTYPE 2

Rules

- START:** Place your empty gardens in front of you and distribute 2 cards to each player
- On each turn player takes a card from the face-down deck and either:
 - plays an insect card into the discard pile
 - places a plant card into their garden
- 3 types of plant cards
 - native - give + points
 - invasive - give - points
 - non-native - give 0 points but also provide powerup
- The game ends once any player has 4 plants in their garden
- The player with the most “ecosystem points” at the end of the game wins



The space in front of each player is their garden, where they place out plant cards

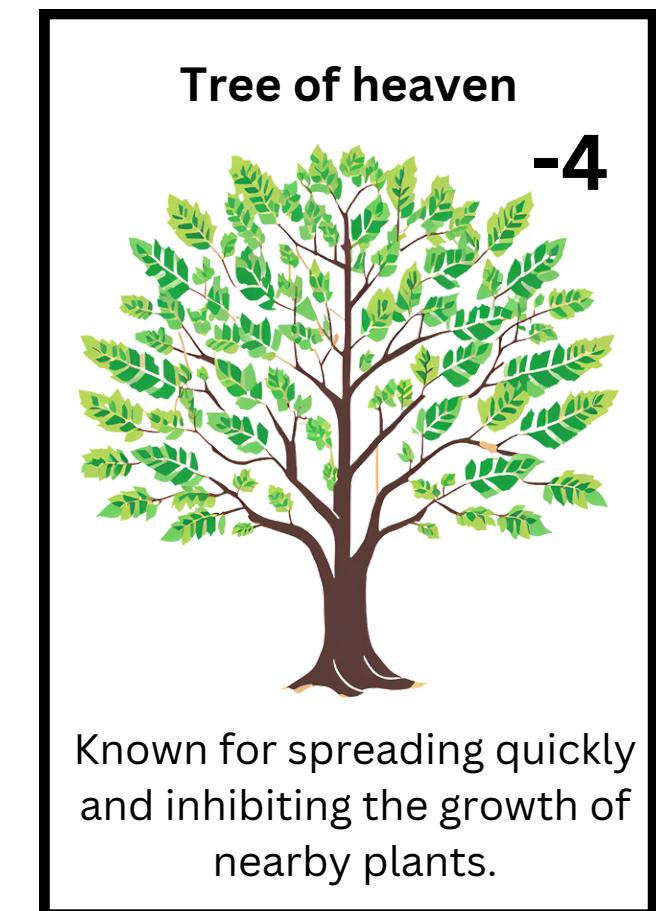
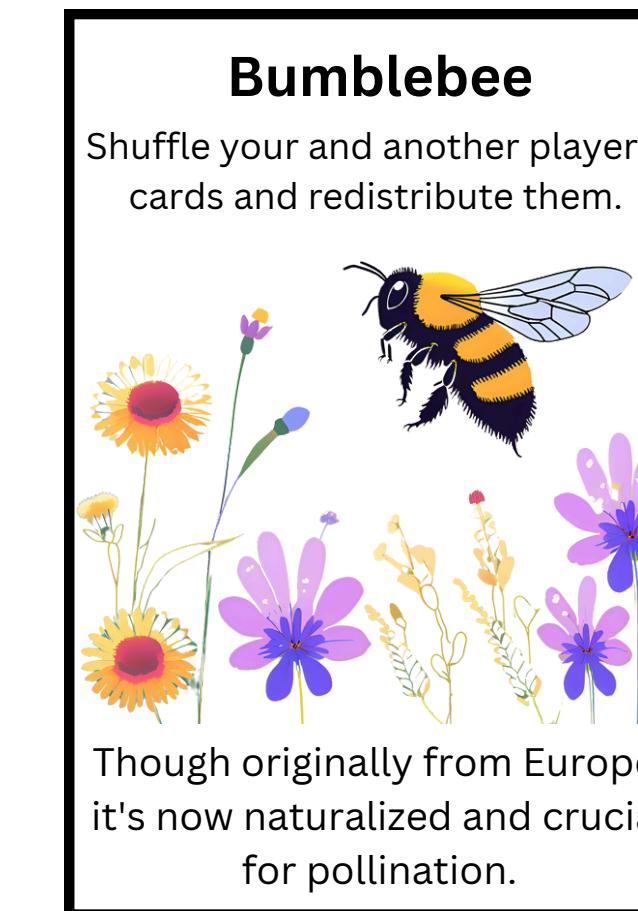
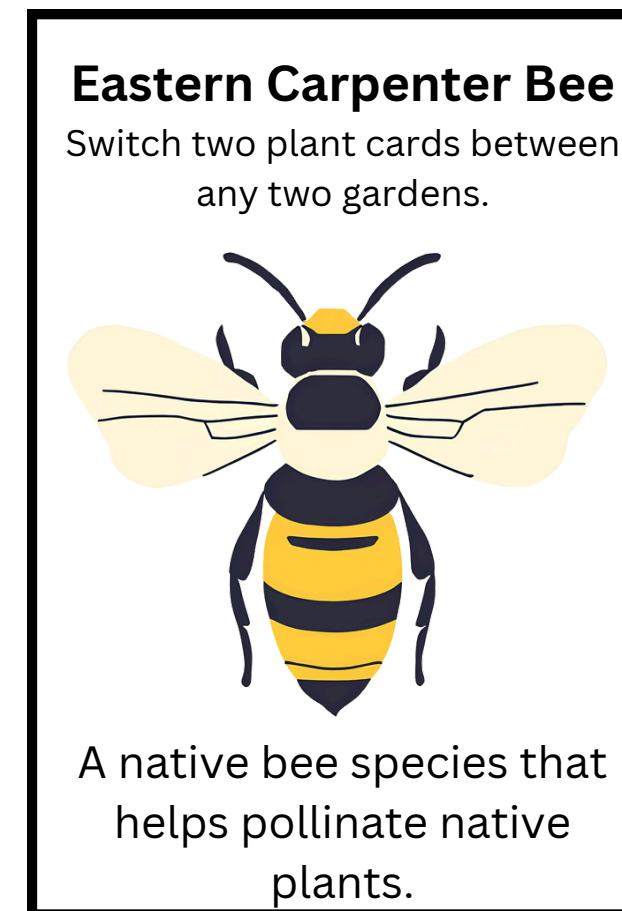
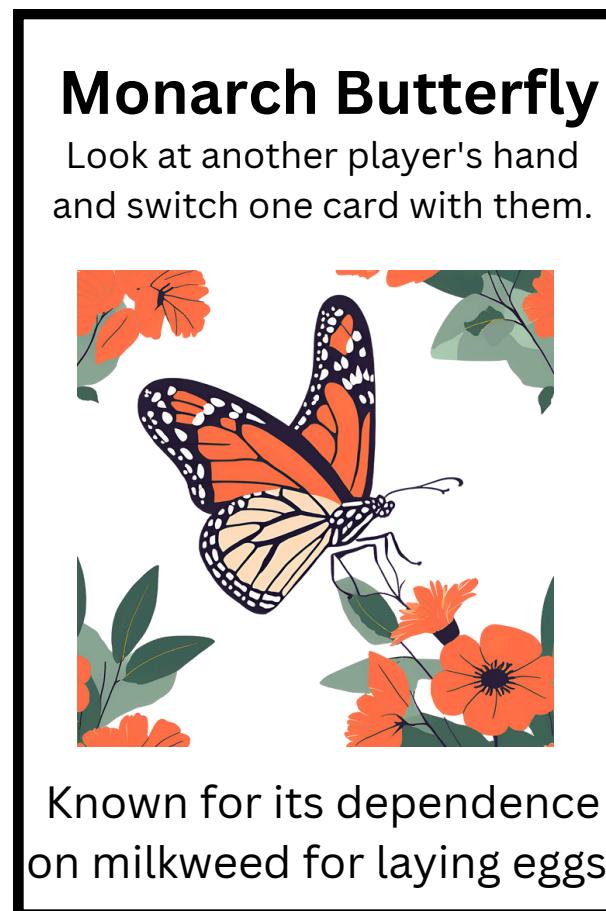
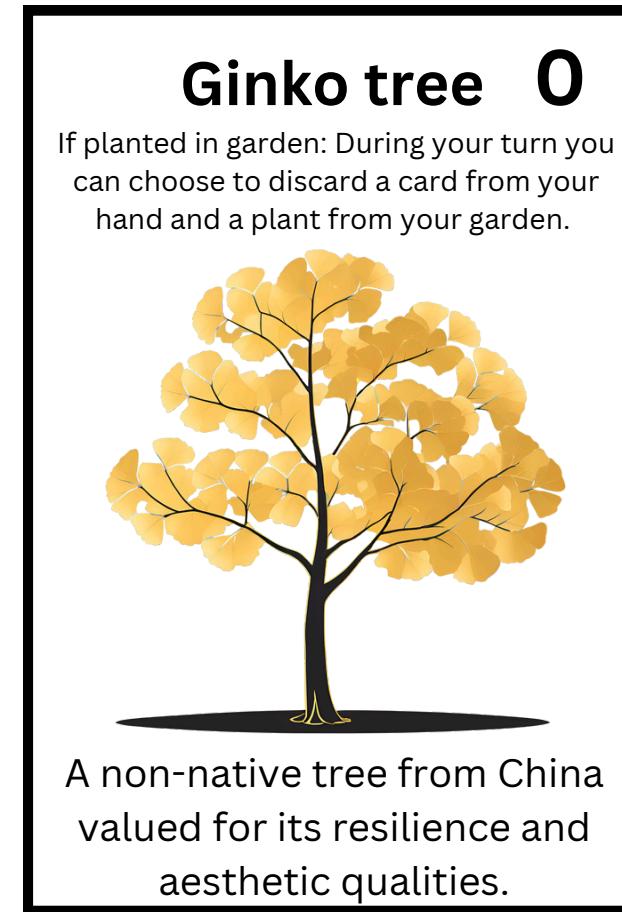
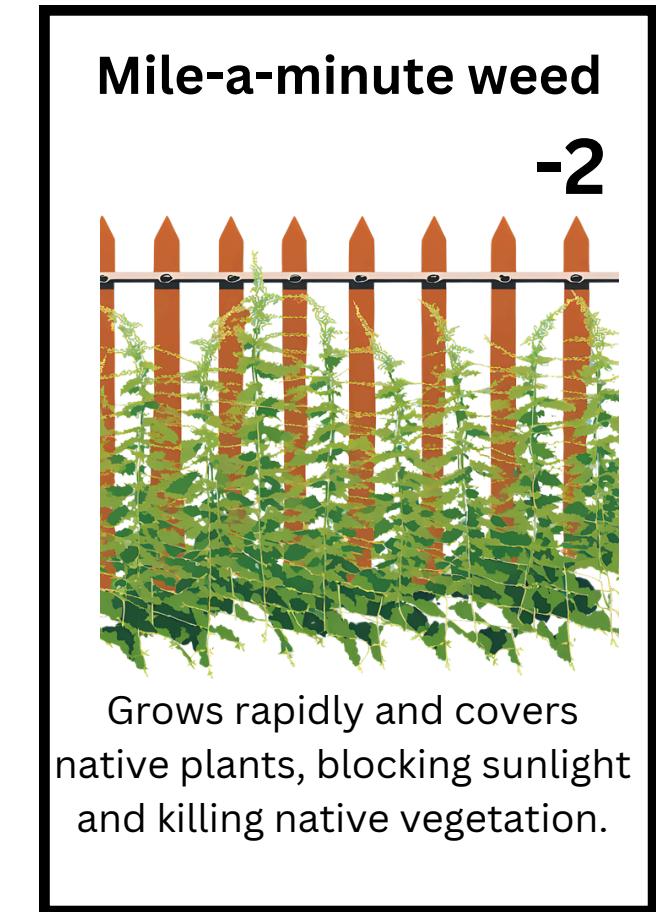
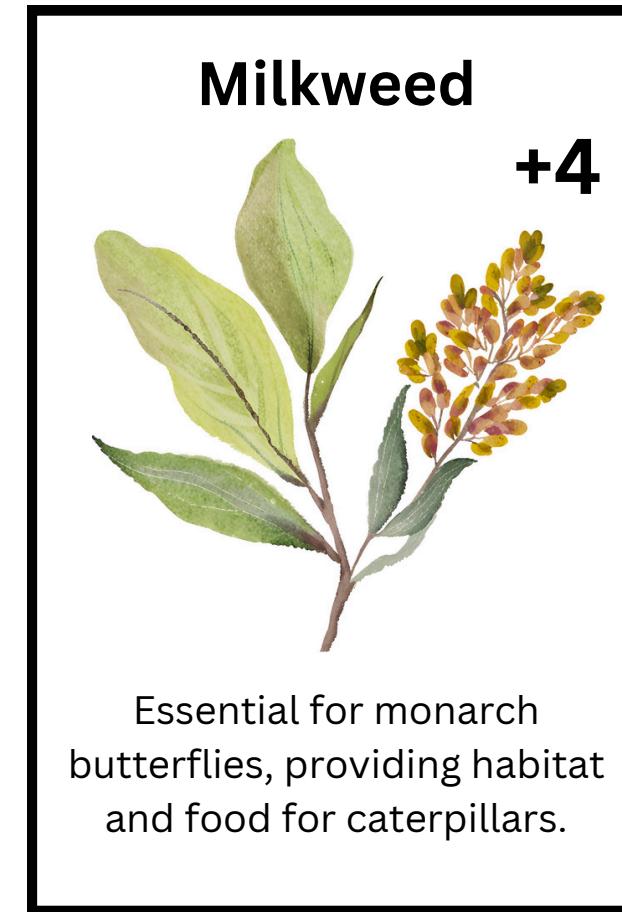
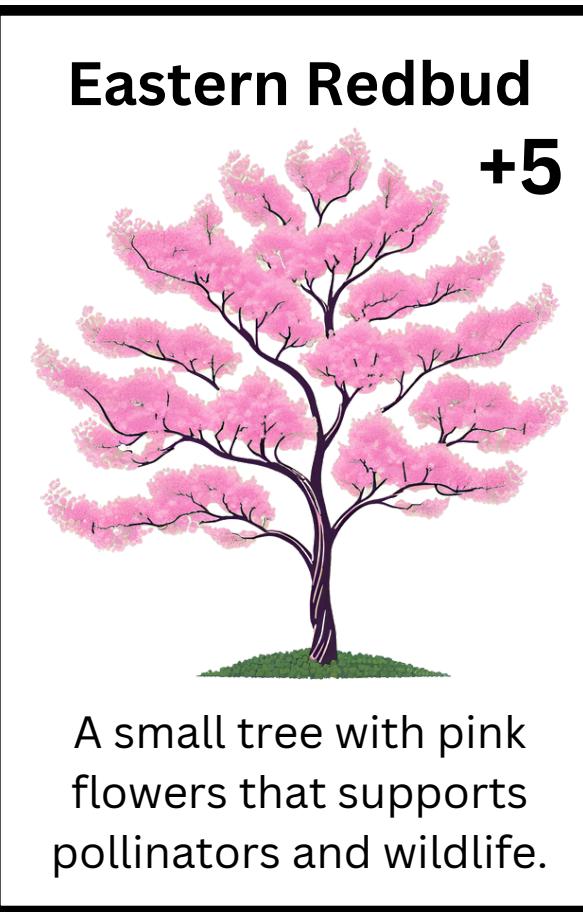
Short fact at the bottom of each card helps educate audience a bit

Non-native plants but not invasive plants provide 0 points, but give the player an ability, such as being able to discard plants from your garden => it is still beneficial to plant non-native plants

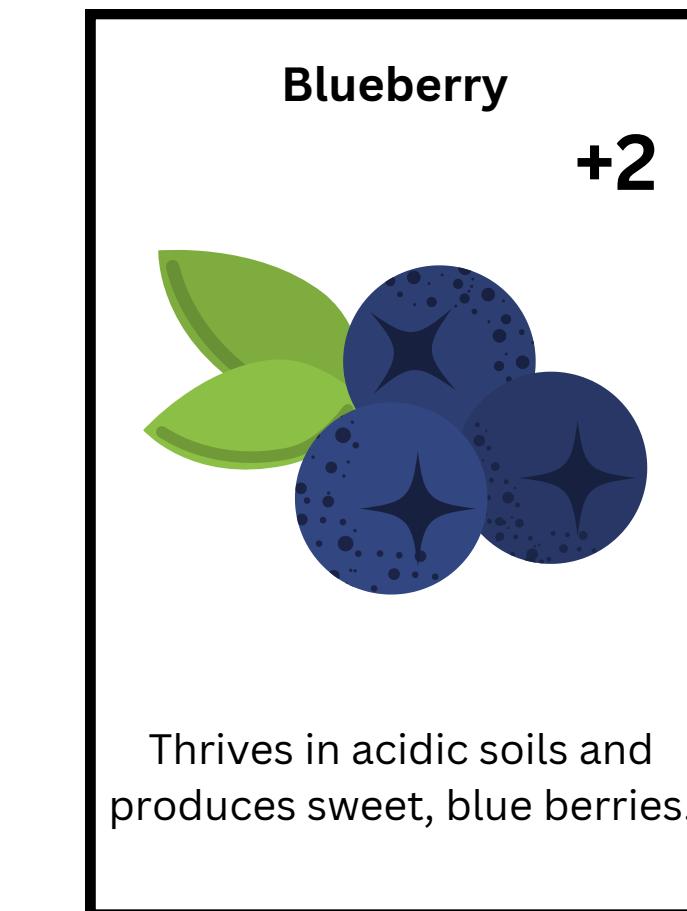
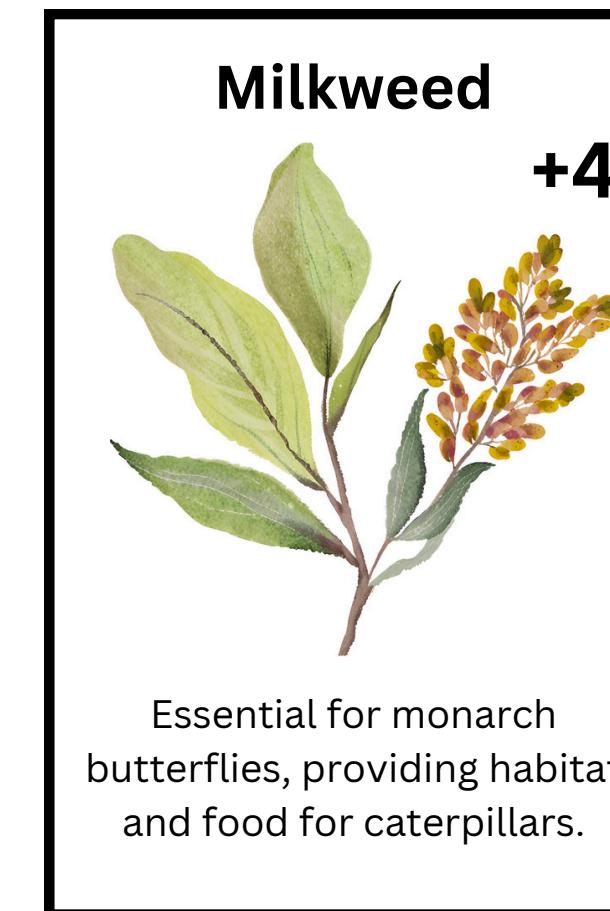
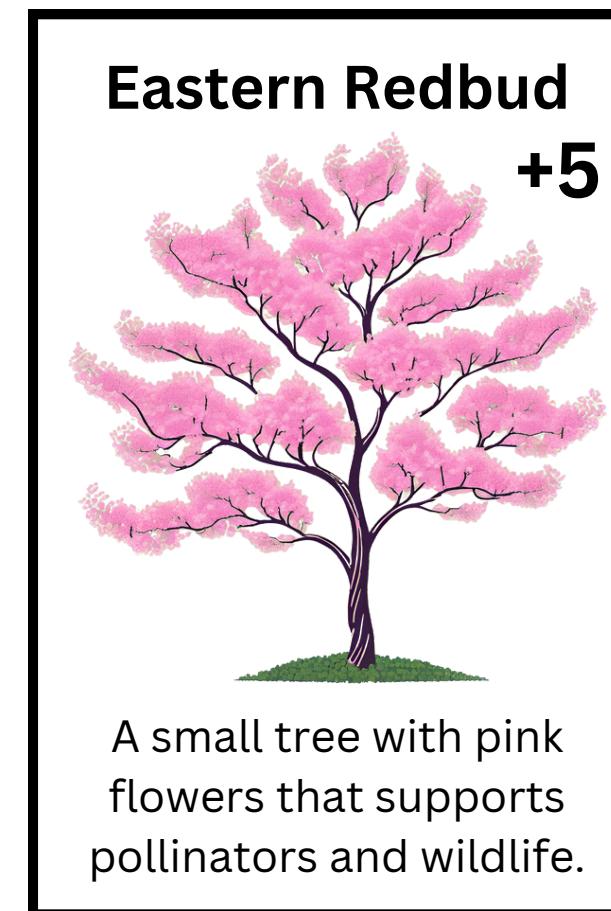
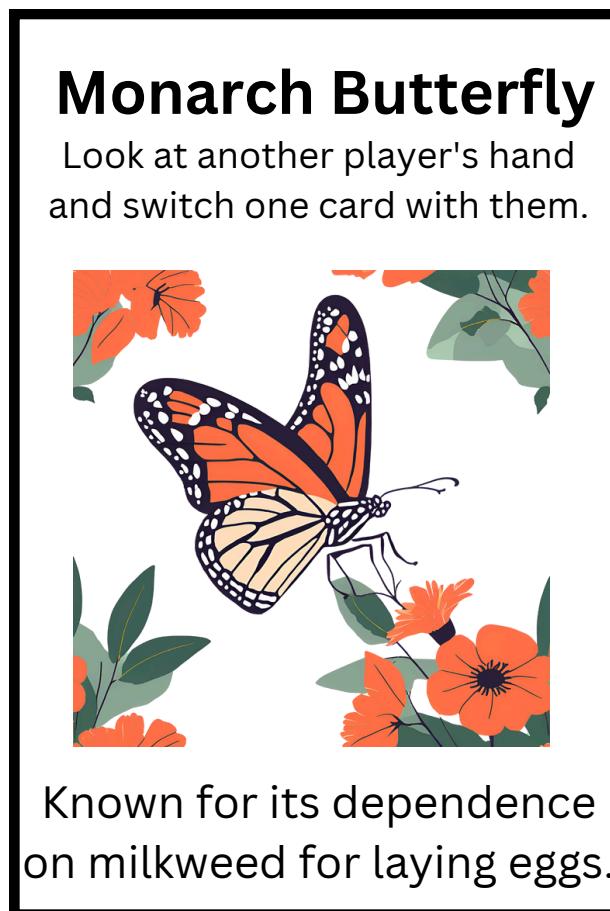
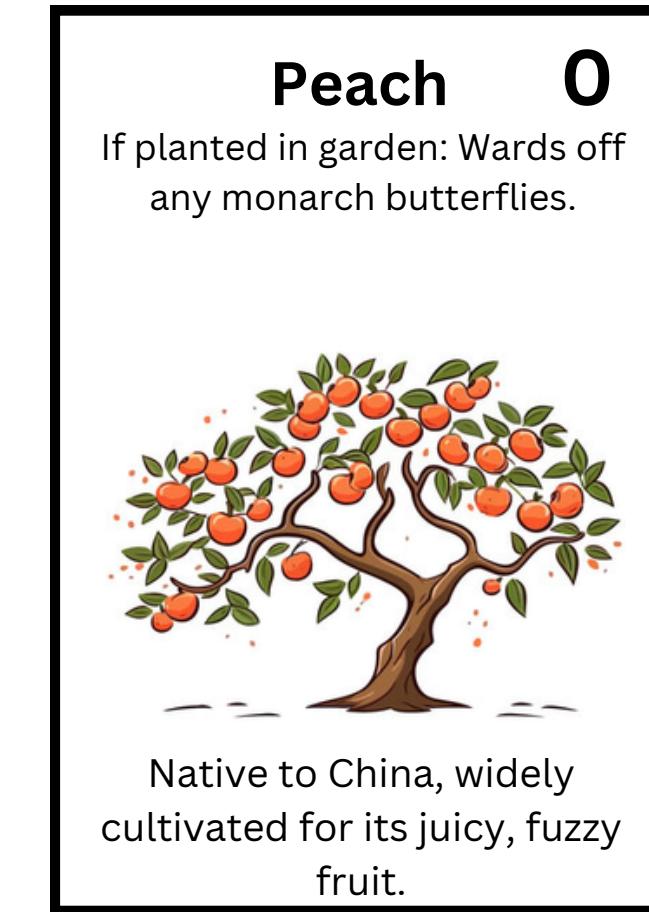
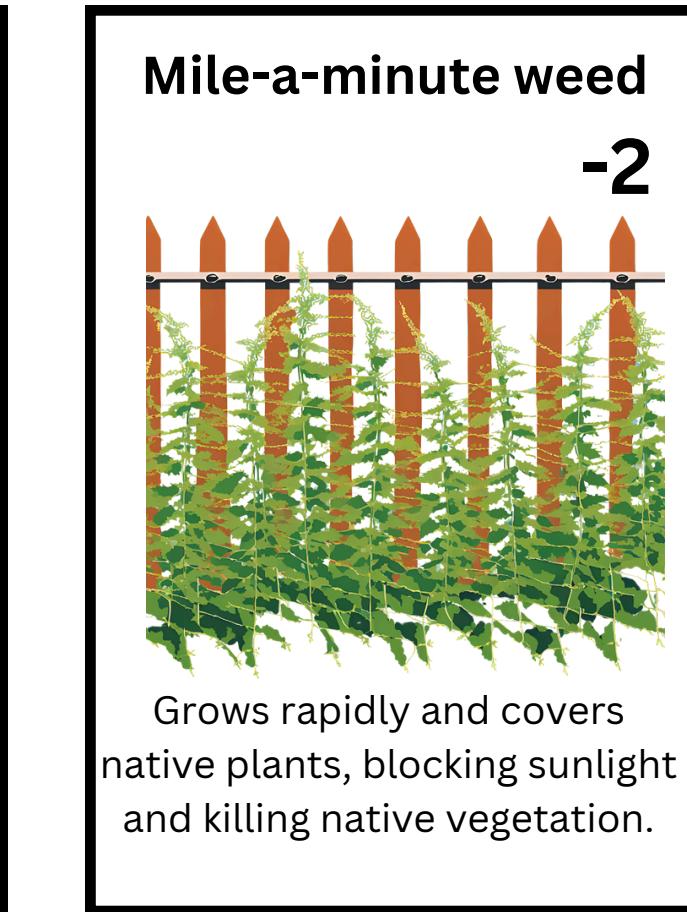
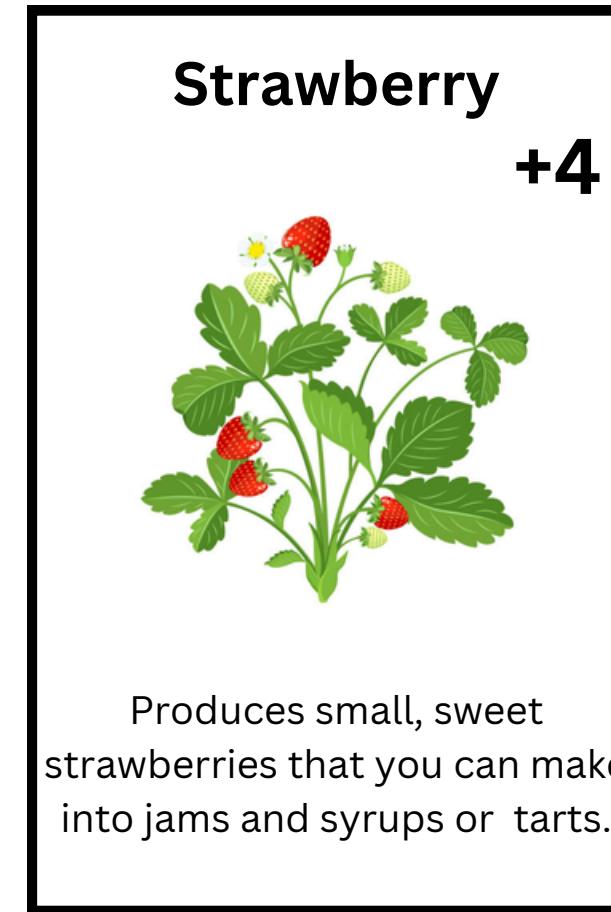
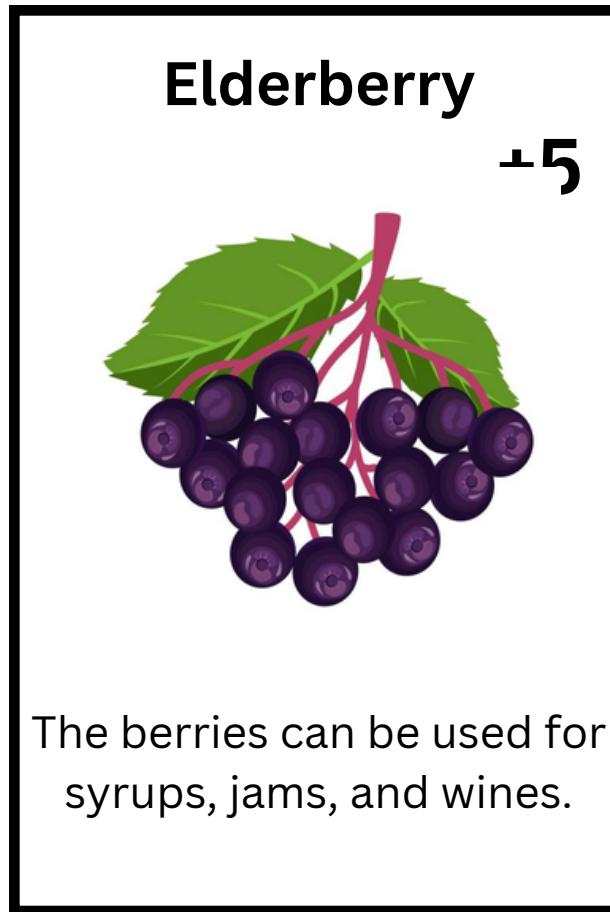
Invasive species give negative points and players should try to get rid of them

Description: Garden Guardians is a strategic card game inspired by Unstable Unicorns, where players compete to cultivate the most vibrant and diverse garden using plant and pollinator cards. The game encourages interaction, strategy, and a bit of chaos, as players can influence each other's gardens while building their own.

Prototype 2 cards



Prototype 2 cards





Playtest 2 of Prototype 2

Reflection

I conducted this playtest with a group of 3 of my friends. It took about 10 minutes for one of them to win, so the time goal was met. I didn't tell them what the transformational goal of the game was, but they ended up figuring it out from the plant descriptions (ie the fact that invasive species are negative points). They enjoyed playing the game a lot and laughed a lot while doing it, but they did say that there weren't enough insect cards. That is interesting because in my previous playtest, there were too many insect cards, so I need to find a nice balance between insect and plant cards. My playtesters also strategized a lot more than in more previous playtest, for example planting an invasive species and then in the next round using a carpenter bee to switch their plant into their opponents garden. It also became an information game where they were trying to figure out what cards their opponents had and if they could play it.

Things I changed going into Prototype 3:

- Added an instruction card so that people can refer to if they ever get confused
- Added many more different plants and insect cards, as well a deer card and a hummingbird card
- Changed the insect card "power ups" to reflect fun facts about the insects such as that crab spiders eat bees, so a crab spider card can counteract a bee card
- All of my playtests were under 10 minutes long, so I added in another spot into the garden so that players now need to plant 5 cards rather than just 4
- I DIDN'T REMOVE THE POINT VALUES - I think that will slow down the game too much as people will be searching up things in the "plant almanac"

GG : PROTOTYPE 2

- thought the game was too luck based → did not strategize
- learned that some of the plants were invasive species (the negative pointer)
- learned that it is still advantageous to plant a "0" plant (non-native)
- learned to sabotage opponent → most fun part
- read descriptions
- liked "ending mechanism" of game → lends itself to 2 strategies

E

- laughing when someone switched an invasive species for ^{a native} of other player
- "this is terrible" → played butterfly but the cards were not good
- a lot of silence → reading all three cards and deciding which one to play
- playtesters played only 1 insect card, everything else was never focusing on points

O

- focusing on points → no benefit to knowing name on card
- played only 1 insect card → game balance off
- game is fun to play because you can strategize and use different strategies to win
- the descriptions of the power ups made them think that is what the plant actually does which made them learn new things

T

- more insects!
- more 0 pointers
- make a separate sheet that contains all the point values so that ppl read names
- have a card that negates the values of cards
- make an "easy stem" board (bee pointing at strawberry)

A

- get rid of peach ability → its funny, when someone plays the monarch

Exciting Ecosystem

PROTOTYPE 3

Rules

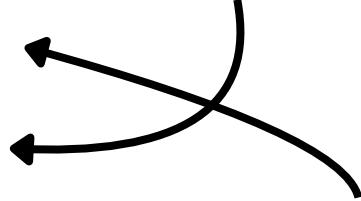
- START:** Place your empty gardens in front of you and distribute 2 cards to each player
- On each turn player takes a card from the face-down deck and either:
 - plays an insect card into the discard pile
 - places a plant card into their garden
- 3 types of plant cards
 - native - give + points
 - invasive - give - points
 - non-native - give 0 points but also provide a powerup
- The game ends once any player has 5 plants in their garden
- The player with the most “ecosystem points” at the end of the game wins



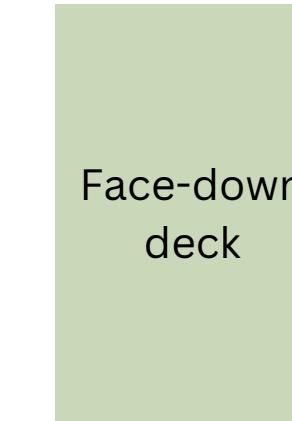
The space in front of each player is their garden, where they place out plant cards



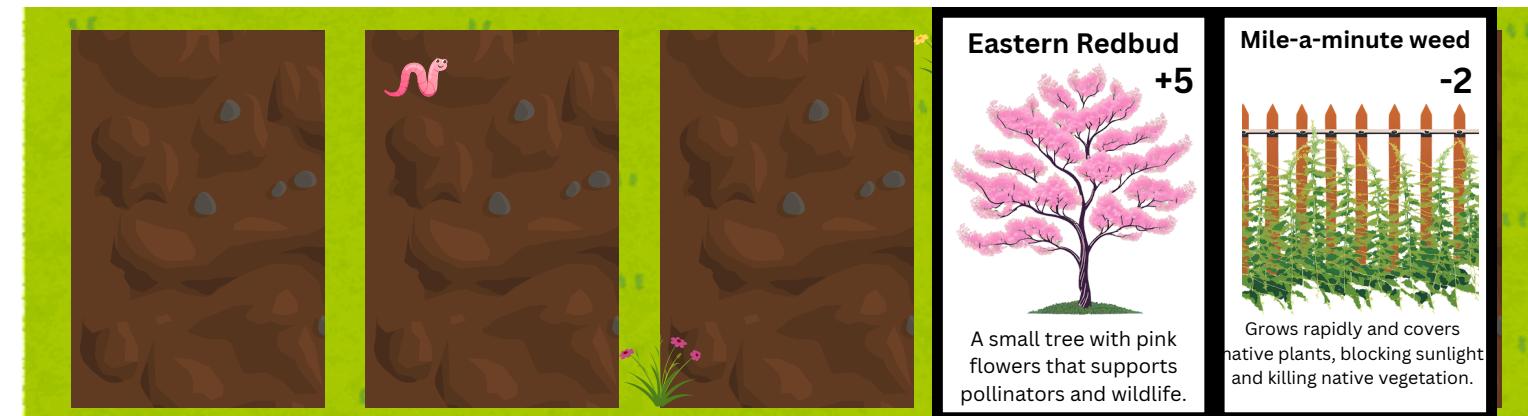
Short fact at the bottom of each card helps educate audience a bit



Non-native plants but not invasive plants provide 0 points, but give the player an ability, such as being able to discard plants from your garden => it is still beneficial to plant non-native plants



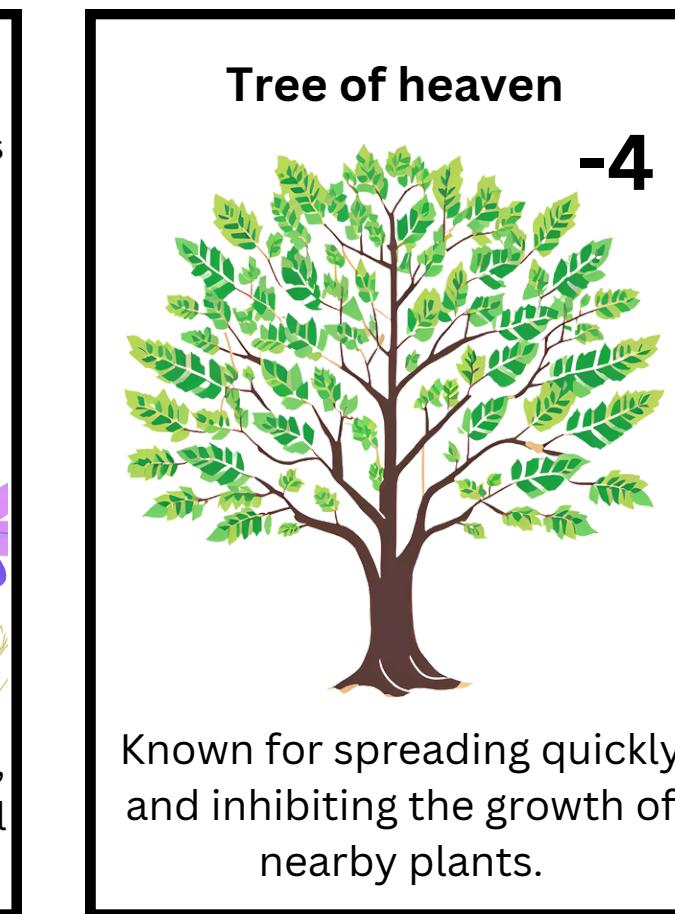
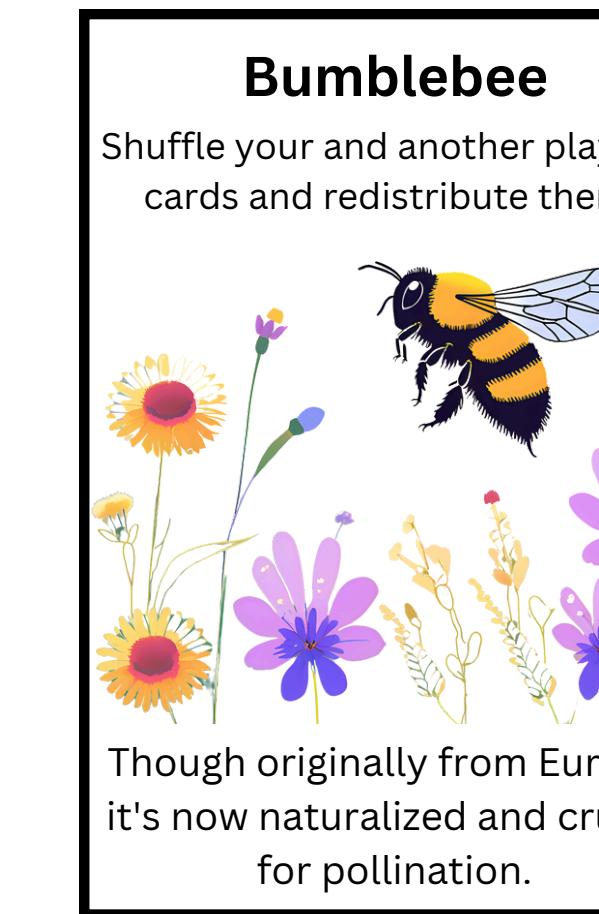
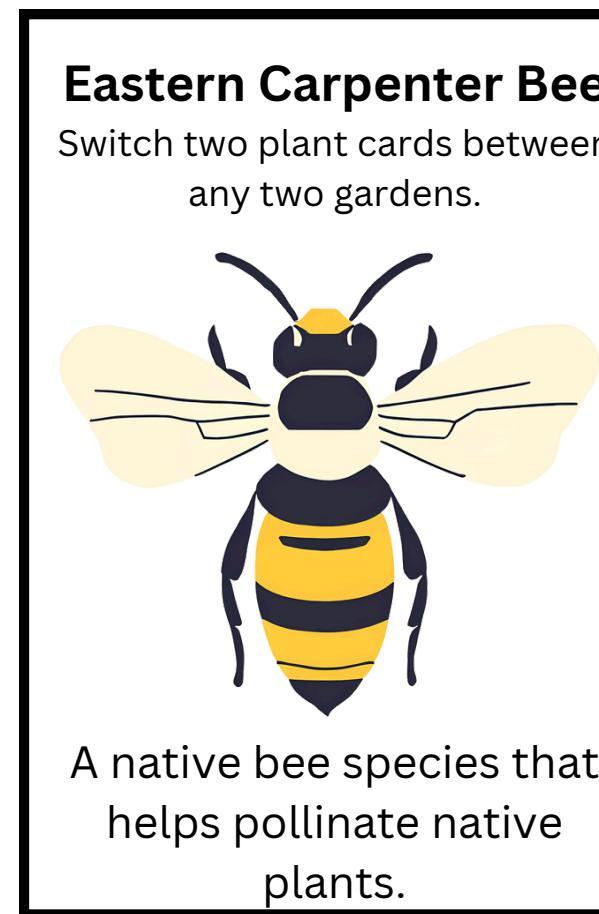
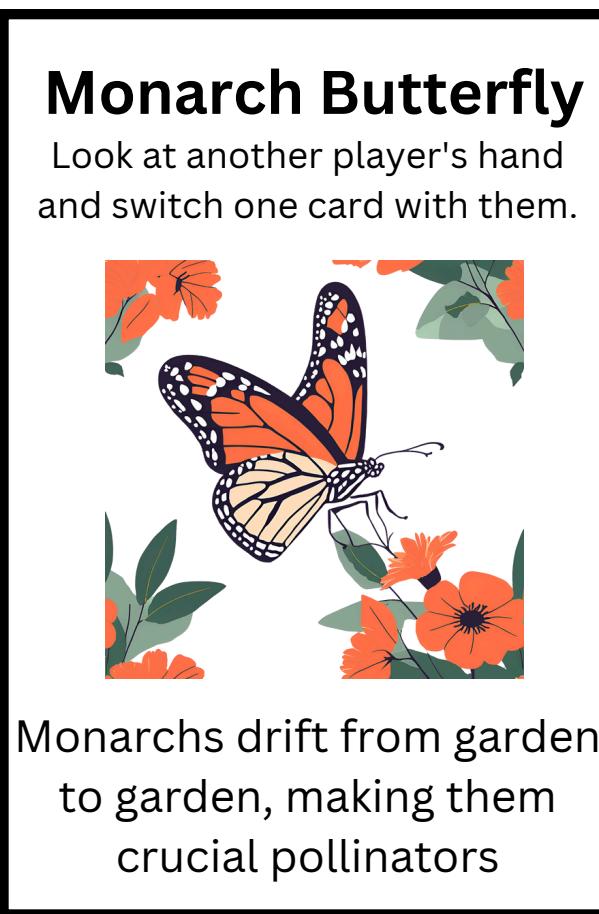
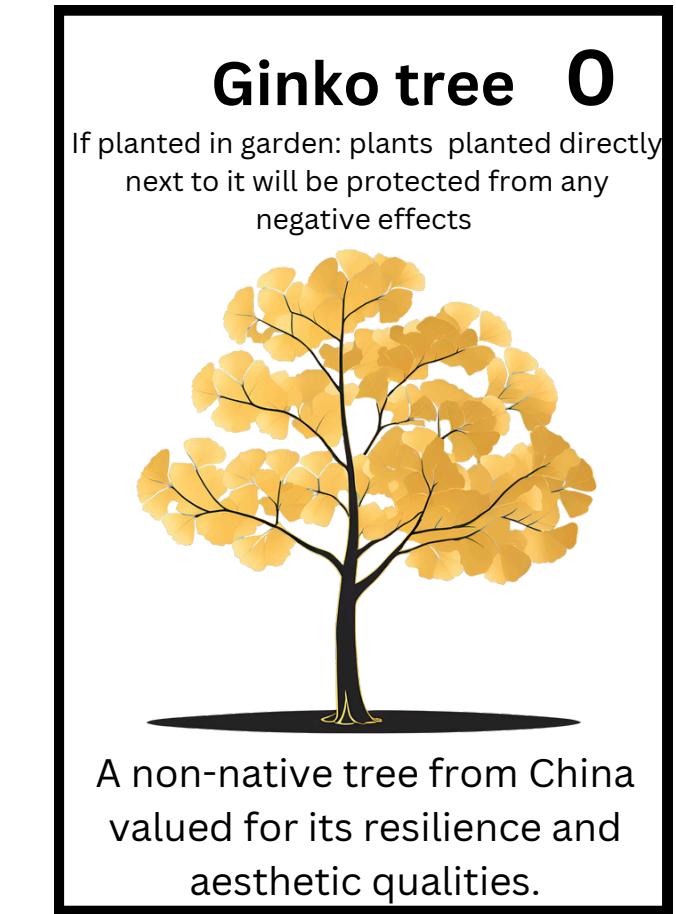
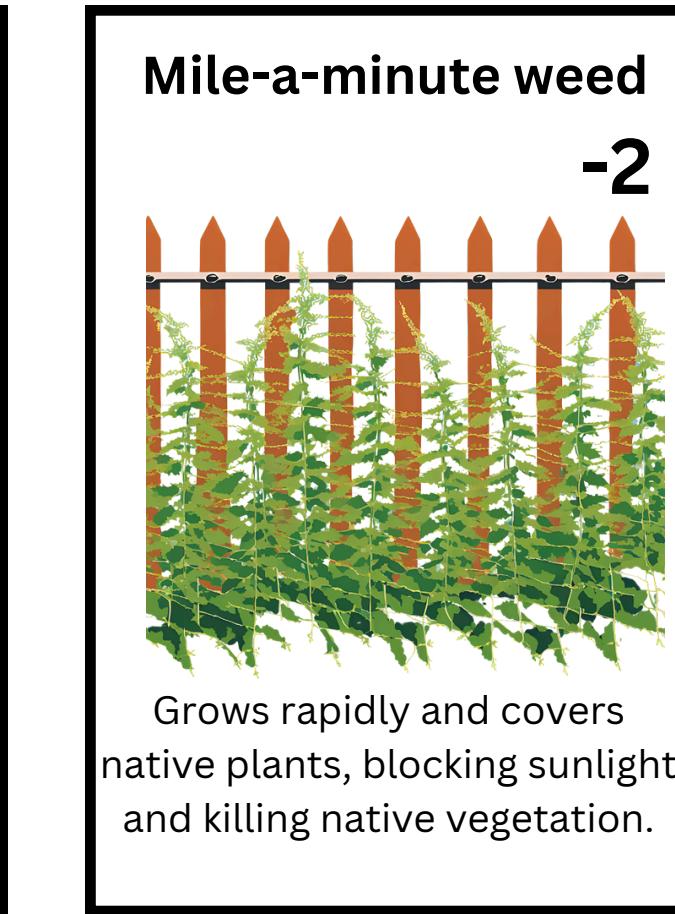
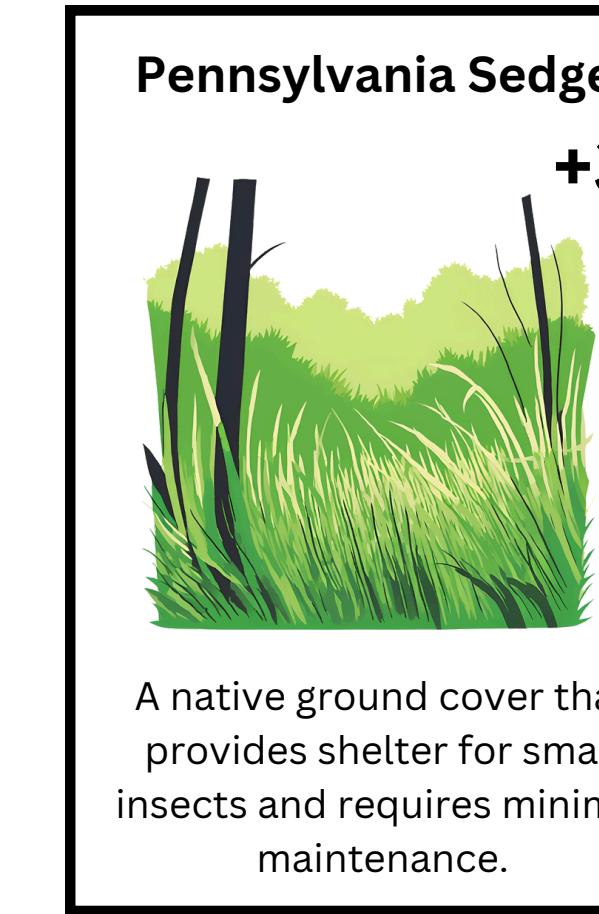
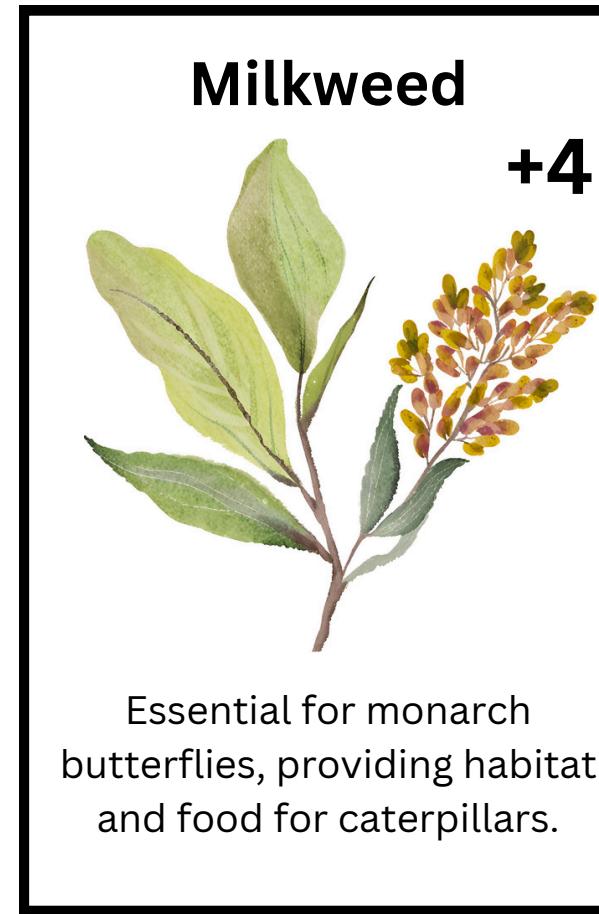
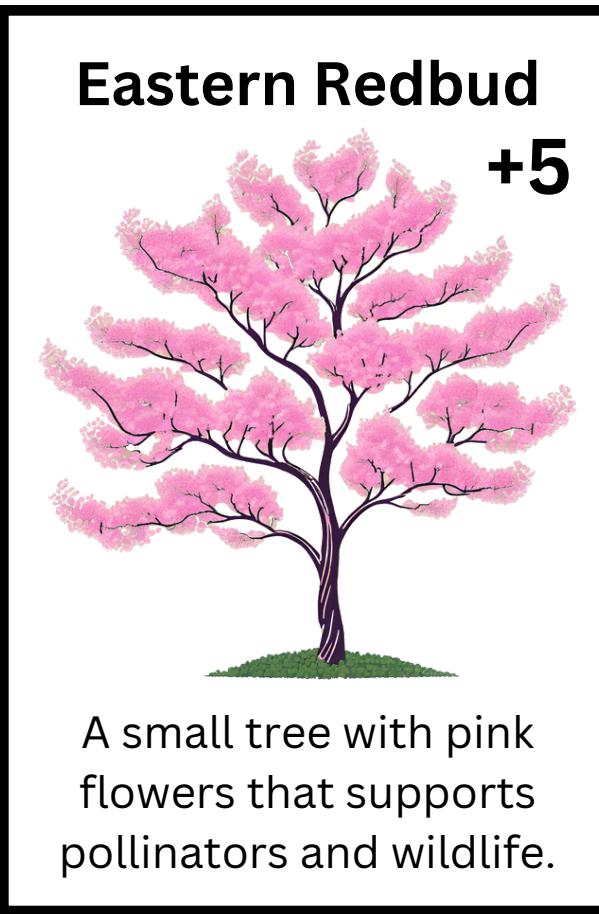
The discard pile, where the player plays insect/wildlife cards that allow them to for example exchange cards with another player.



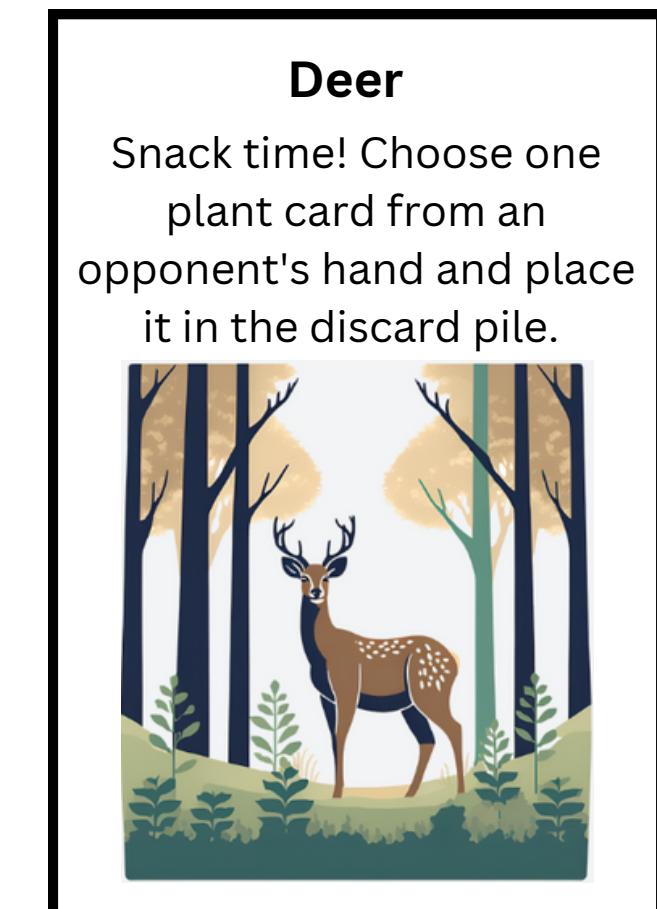
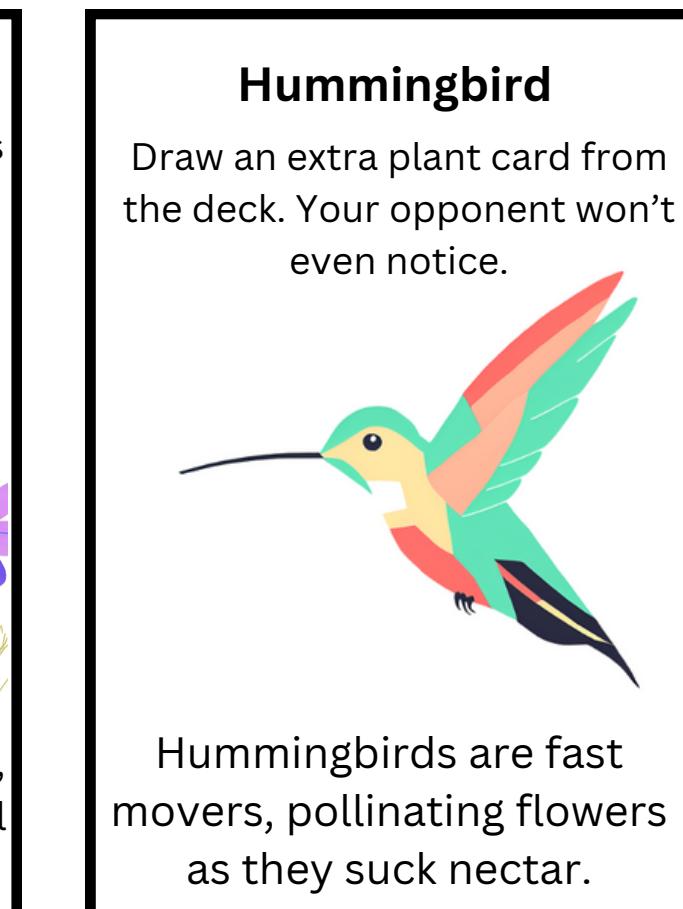
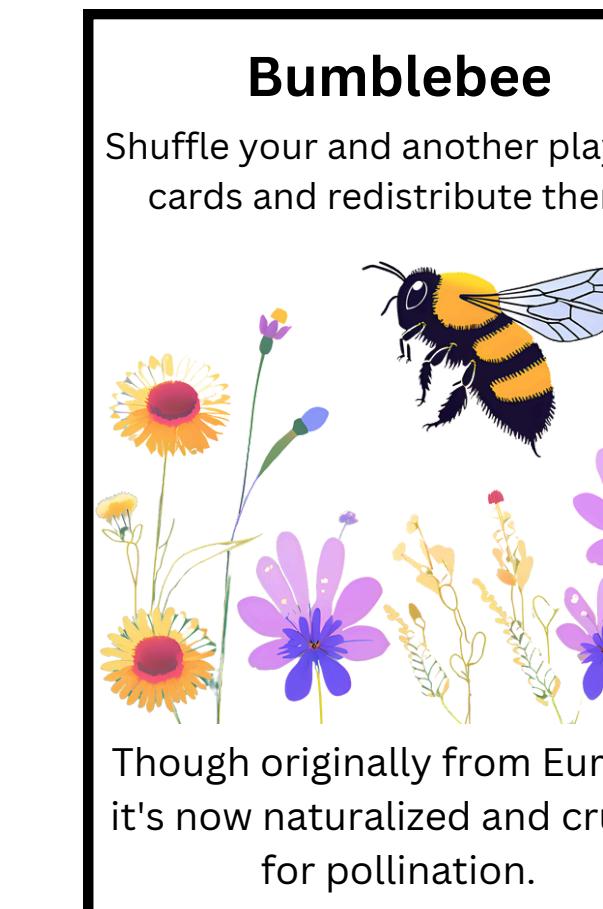
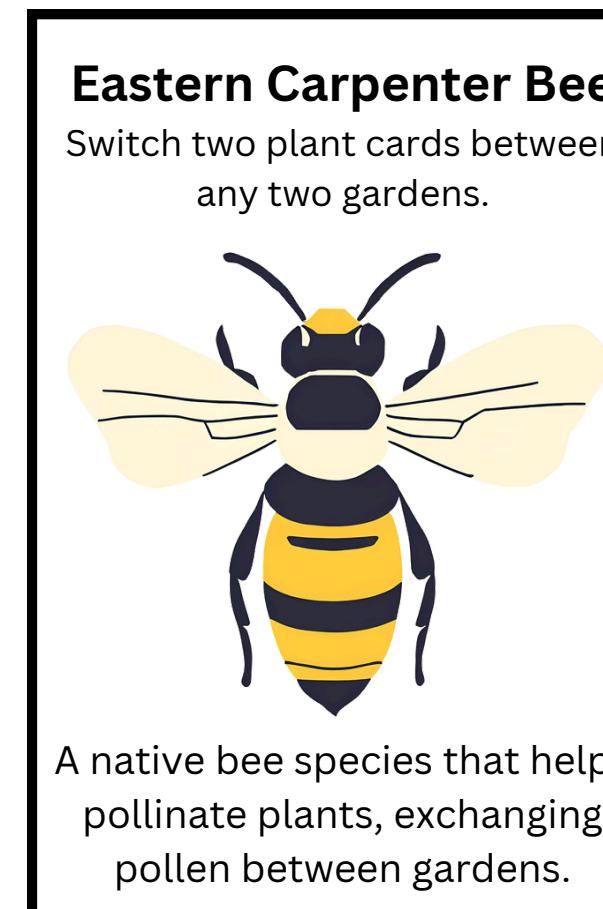
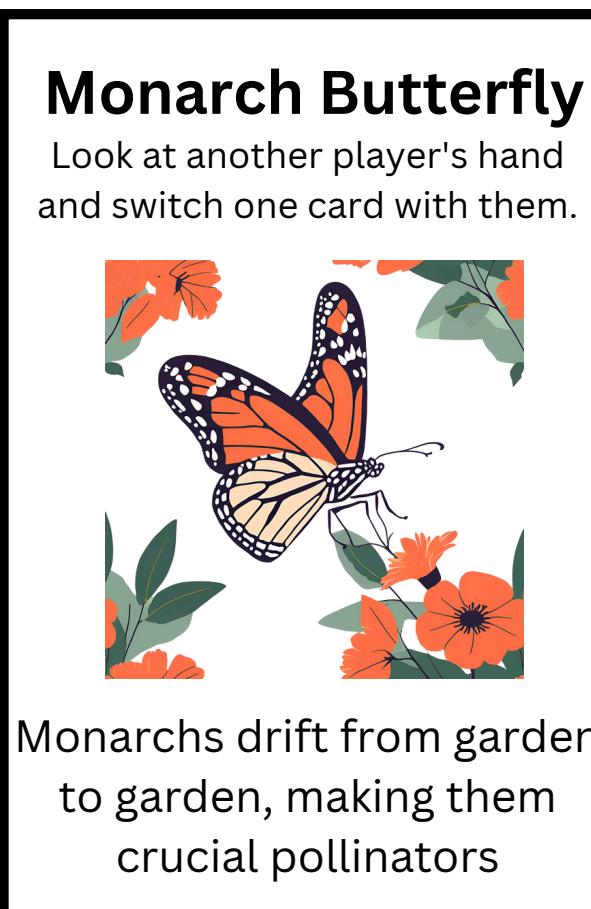
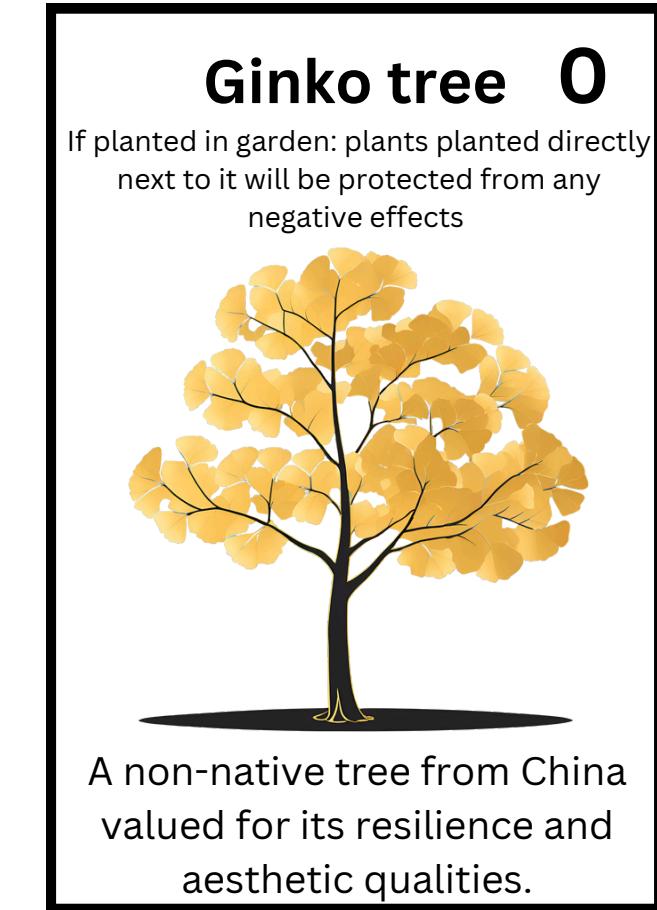
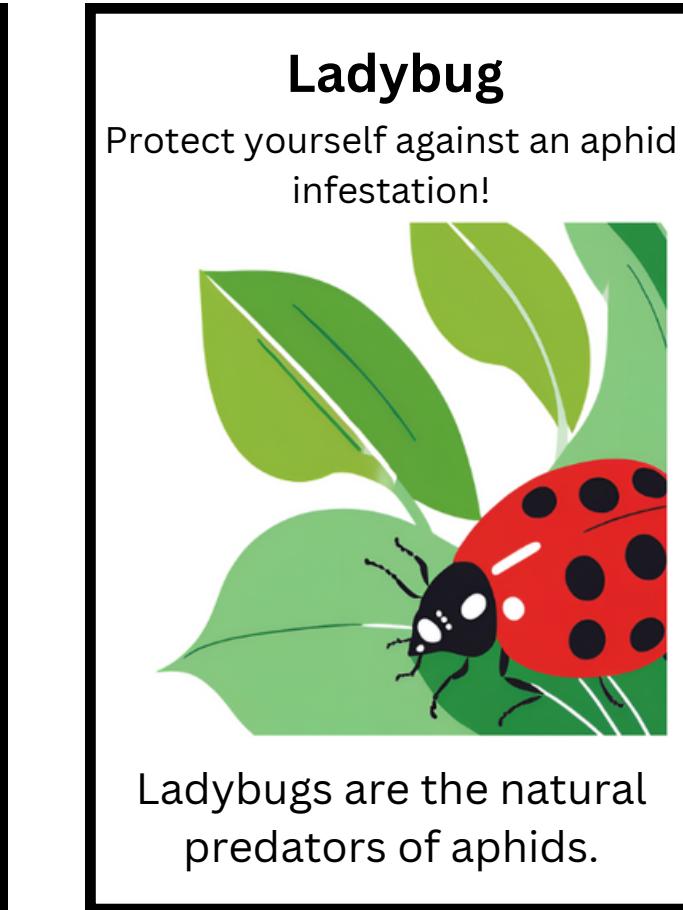
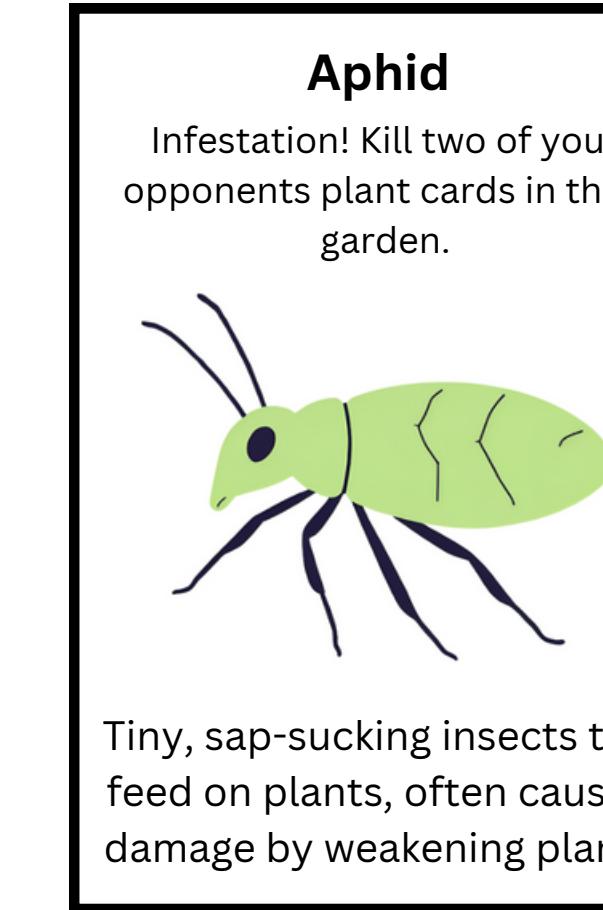
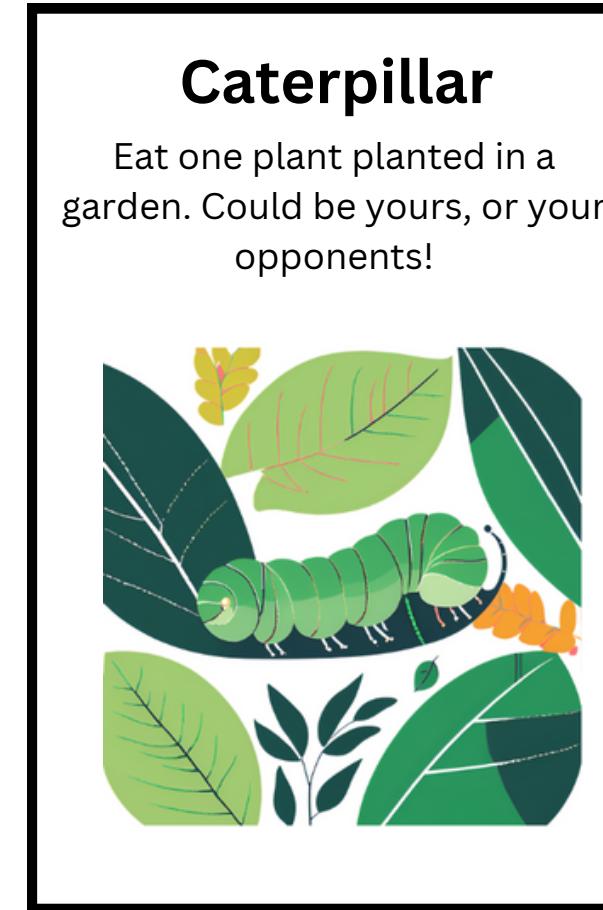
Invasive species give negative points and players should try to get rid of them

Description: Garden Guardians is a strategic card game inspired by Unstable Unicorns, where players compete to cultivate the most vibrant and diverse garden using plant and pollinator cards. The game encourages interaction, strategy, and a bit of chaos, as players can influence each other's gardens while building their own.

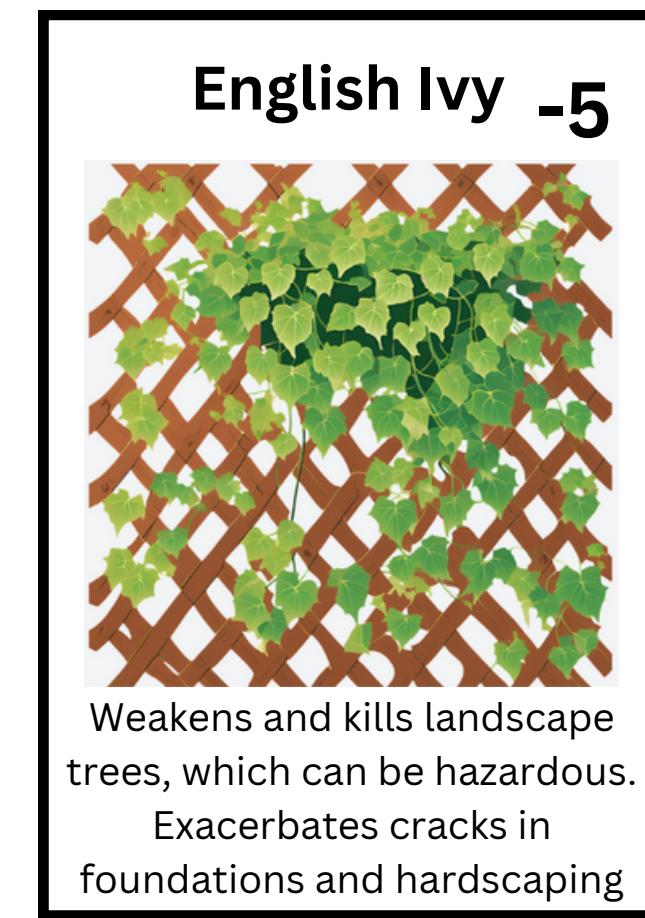
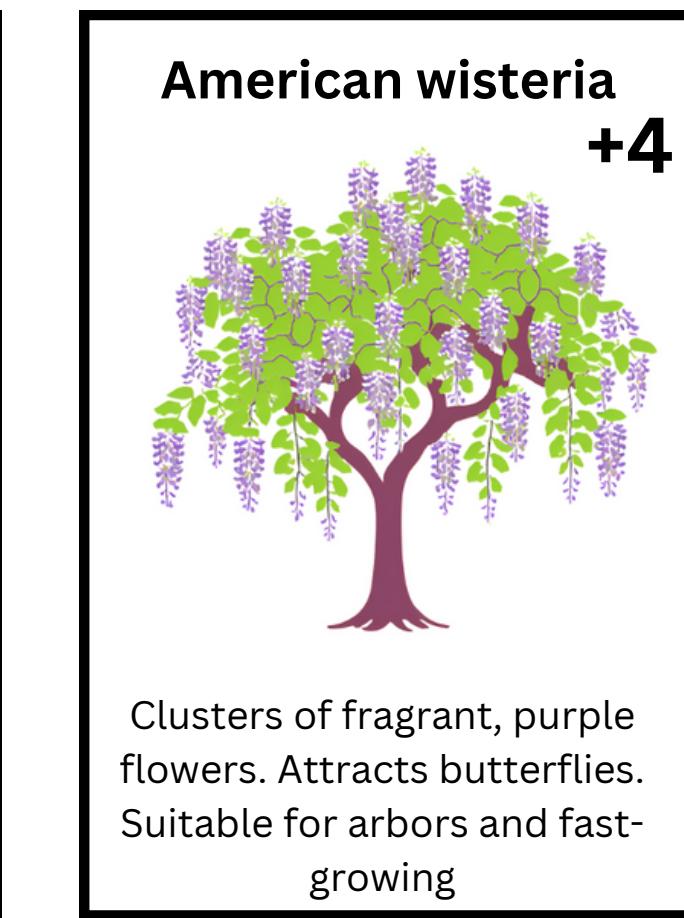
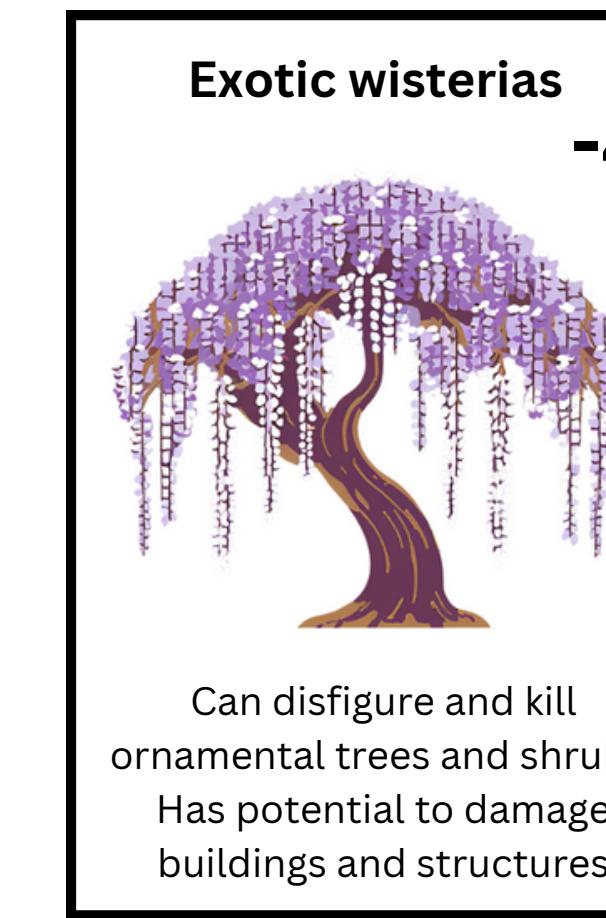
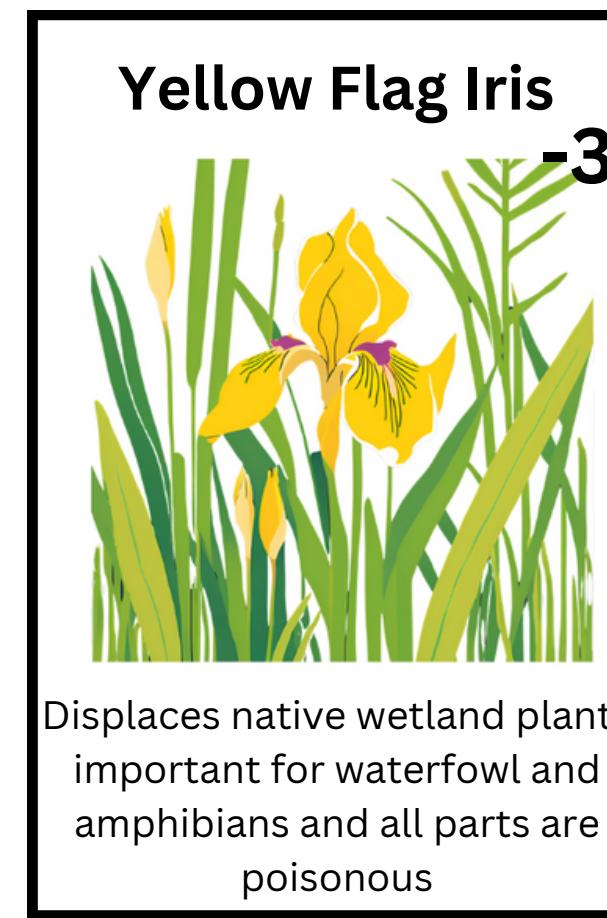
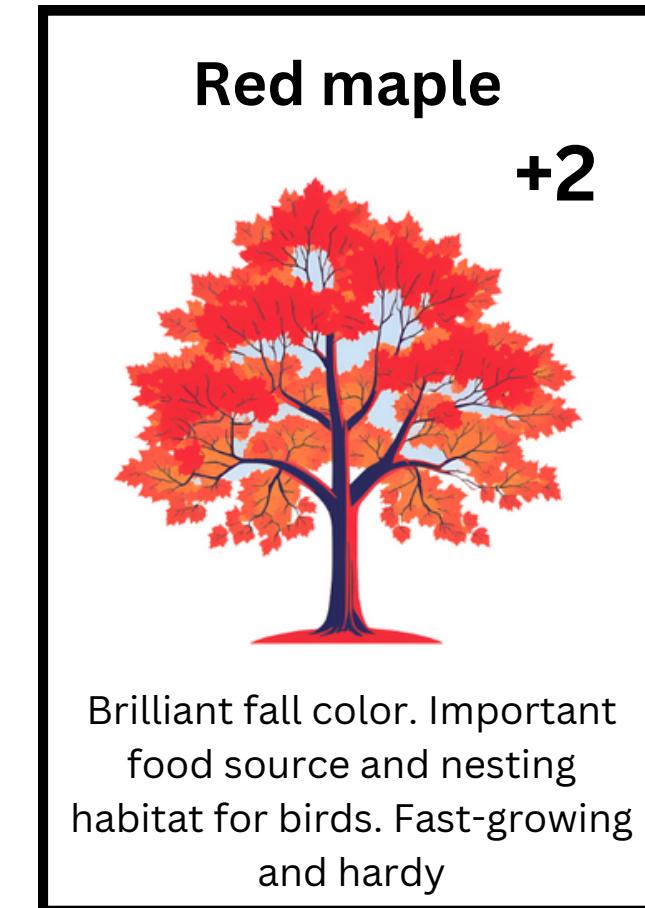
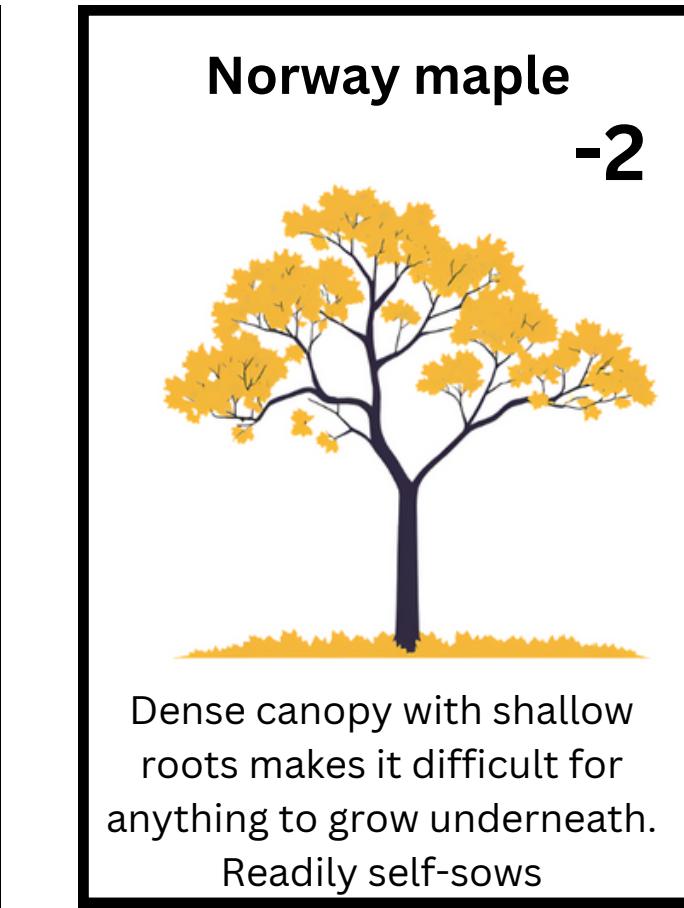
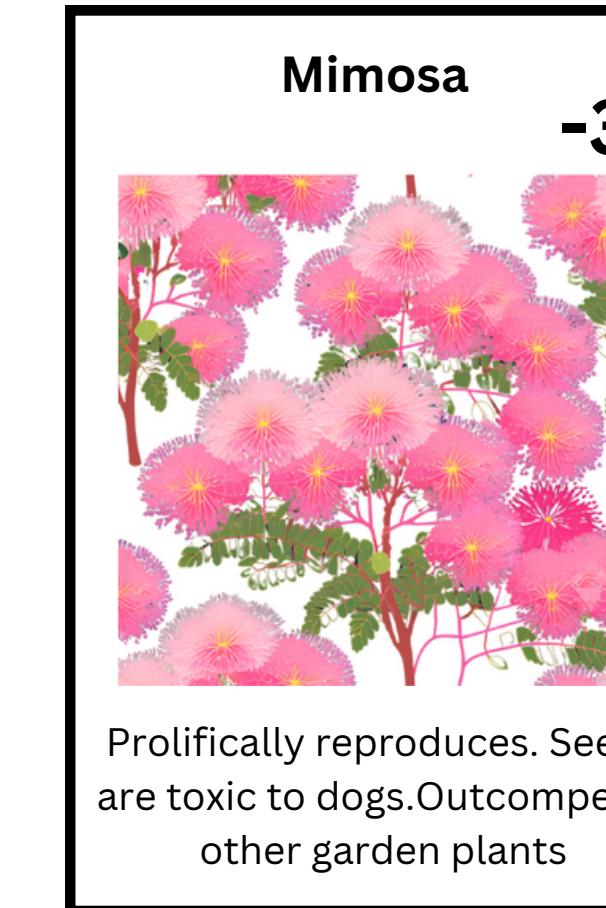
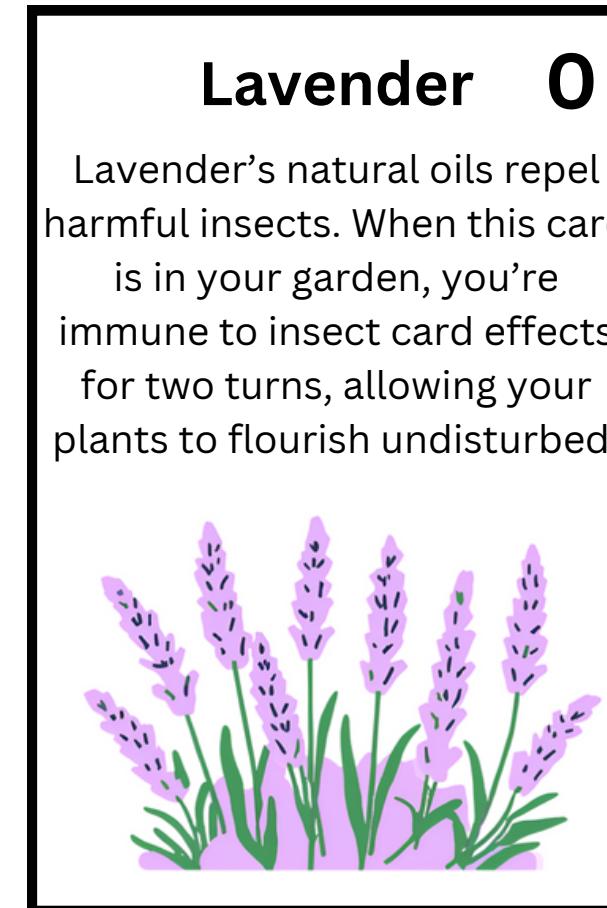
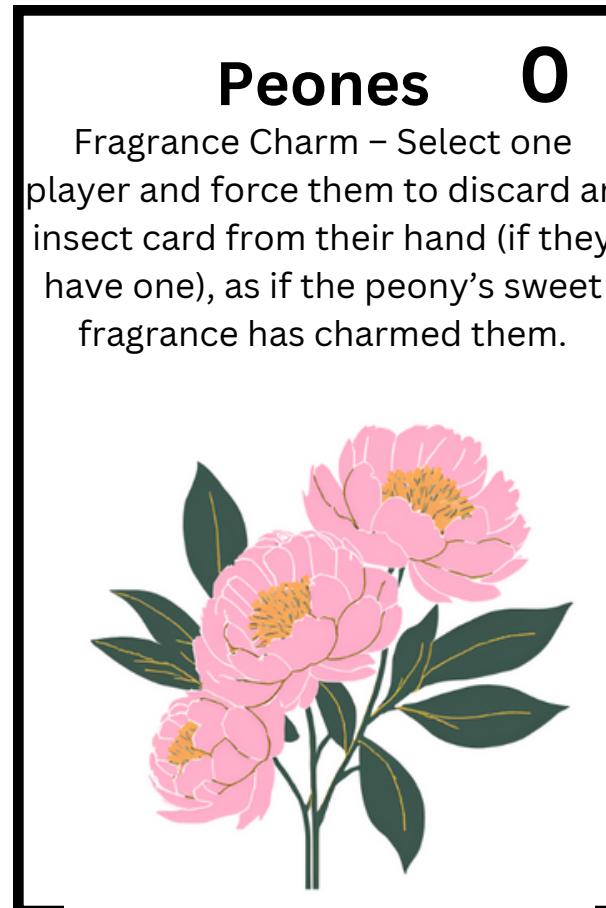
Prototype 3 cards



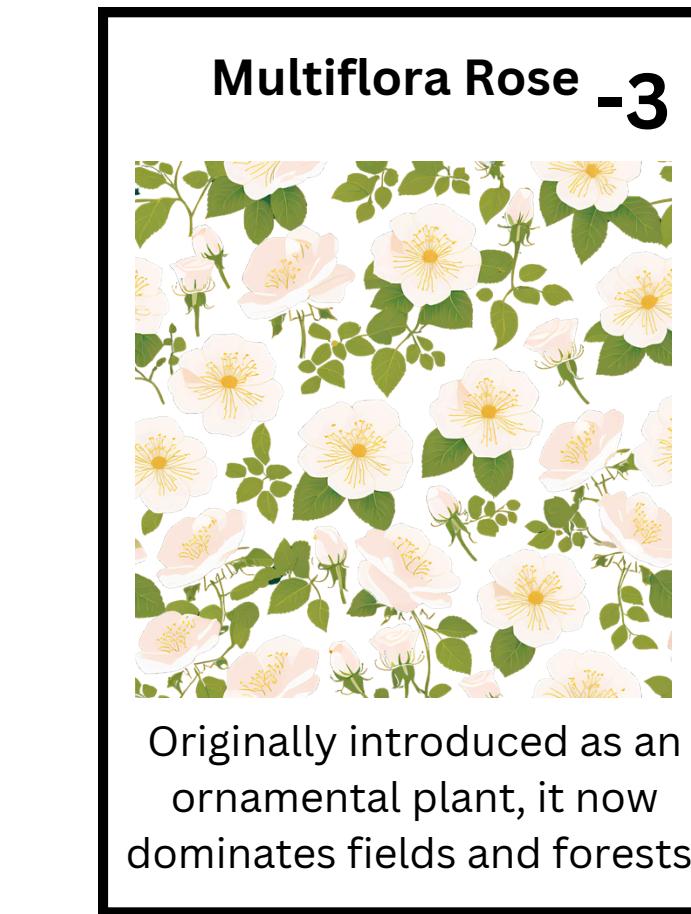
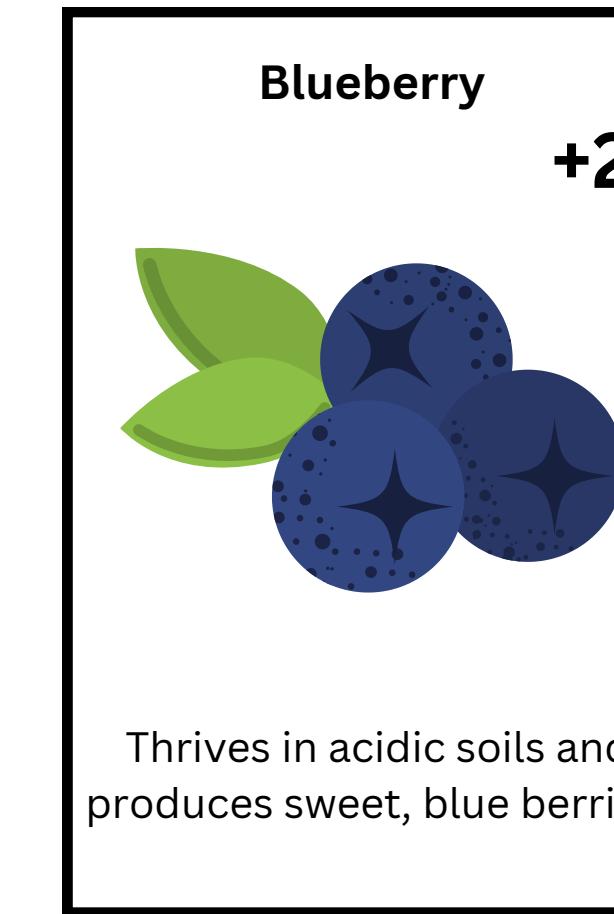
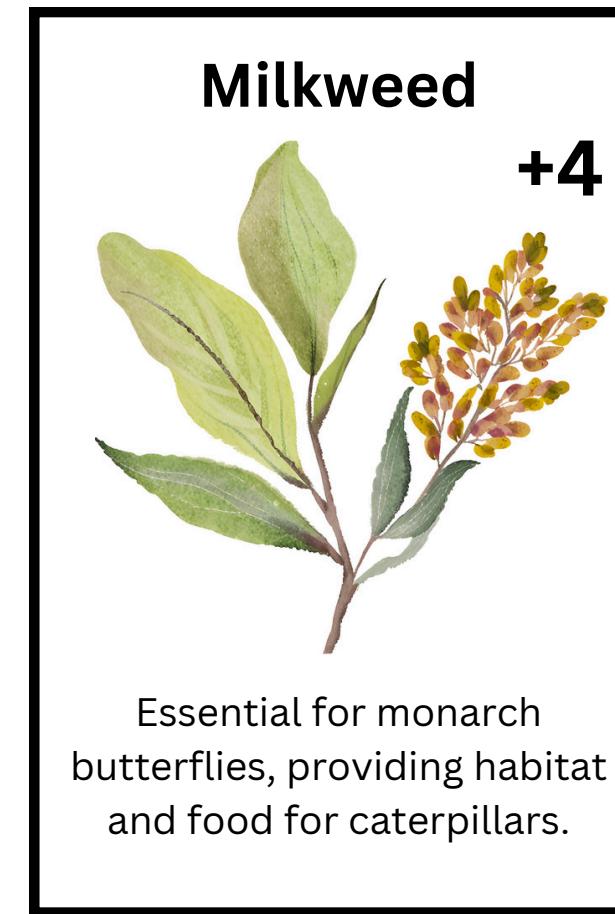
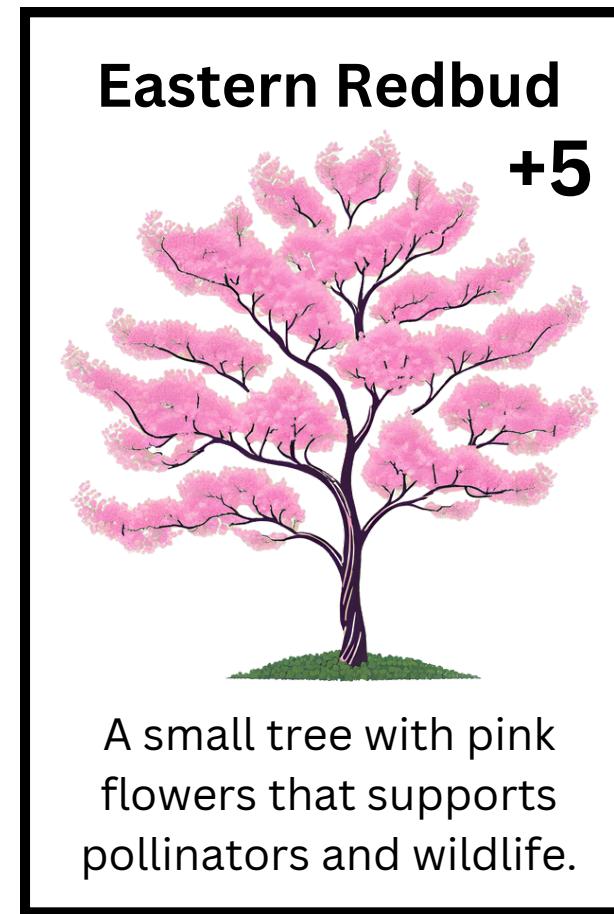
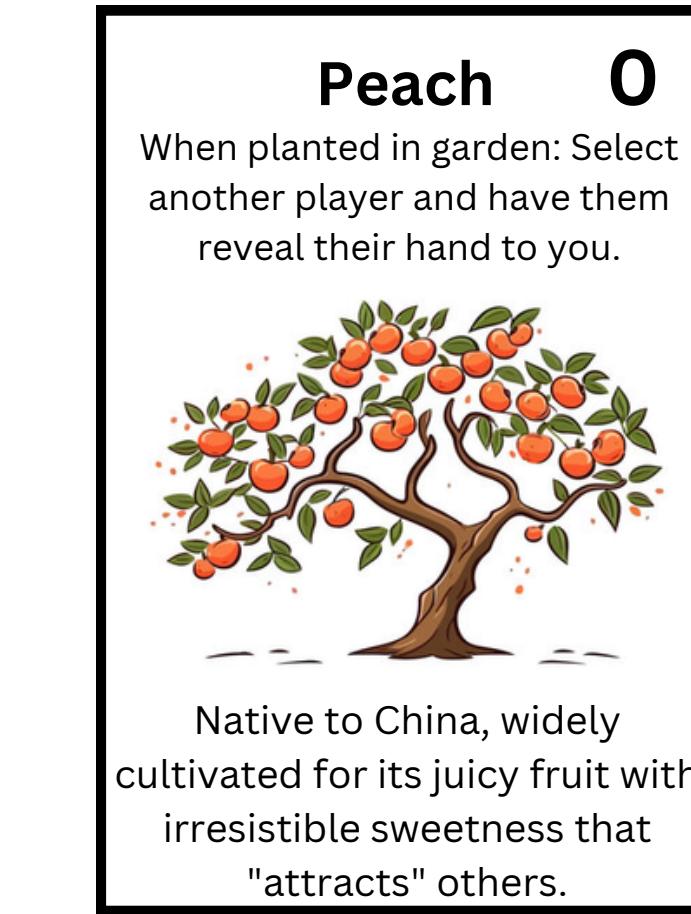
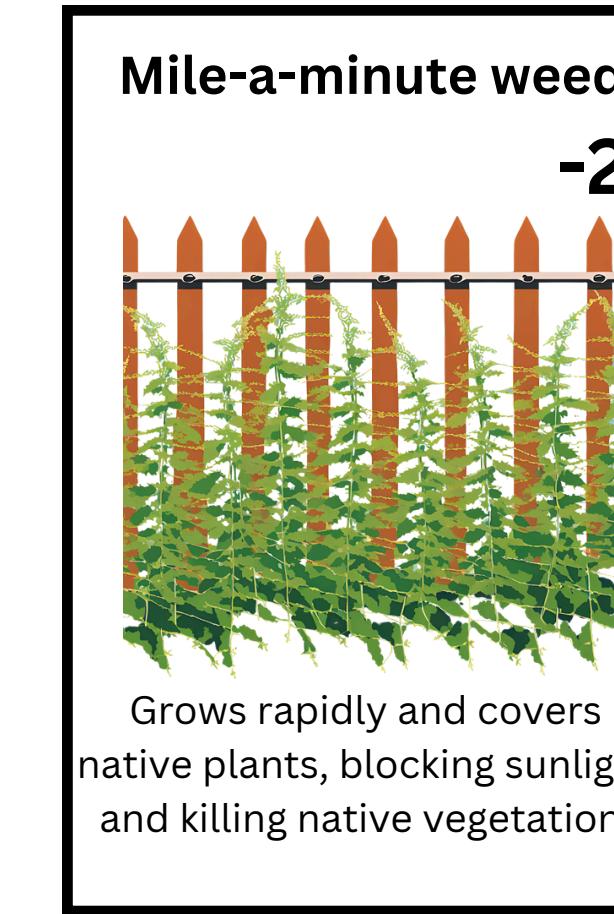
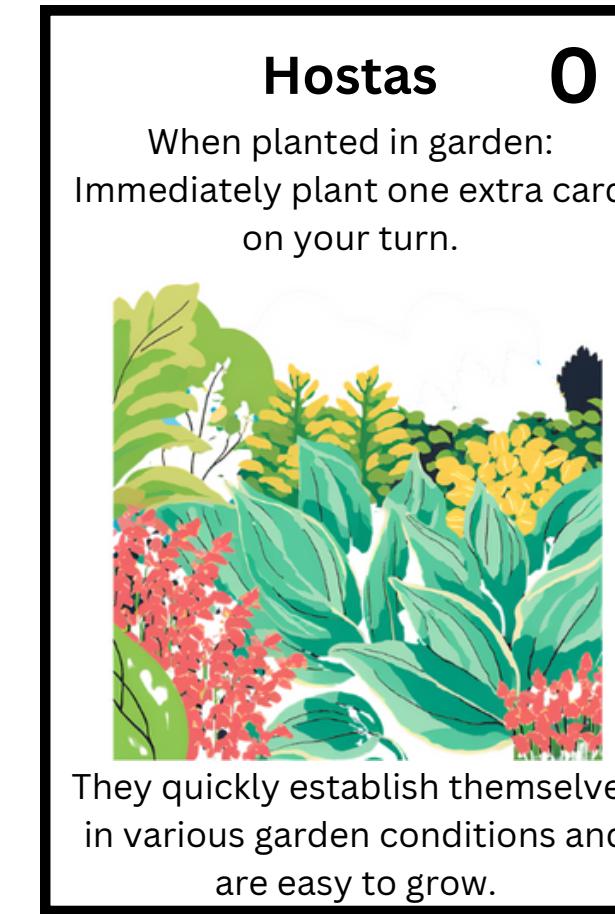
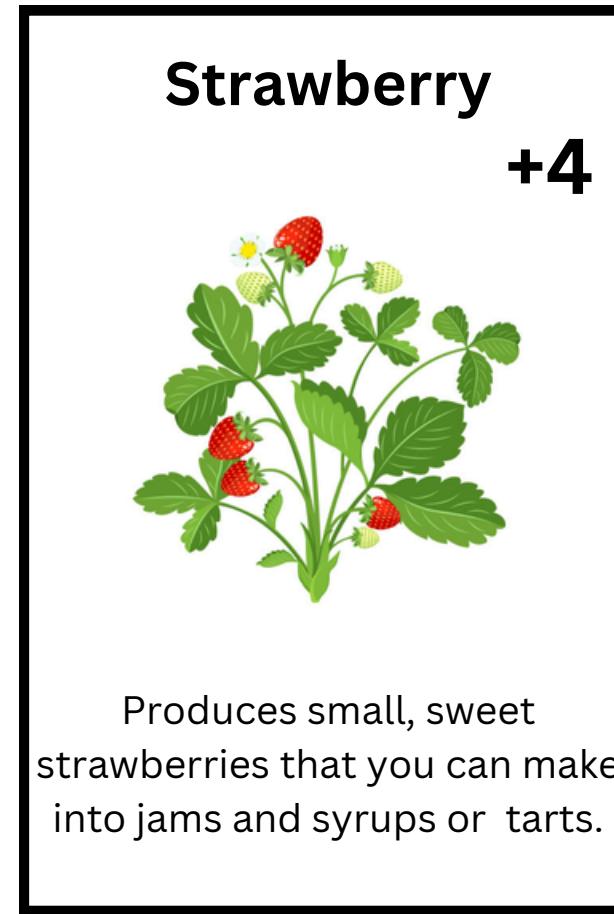
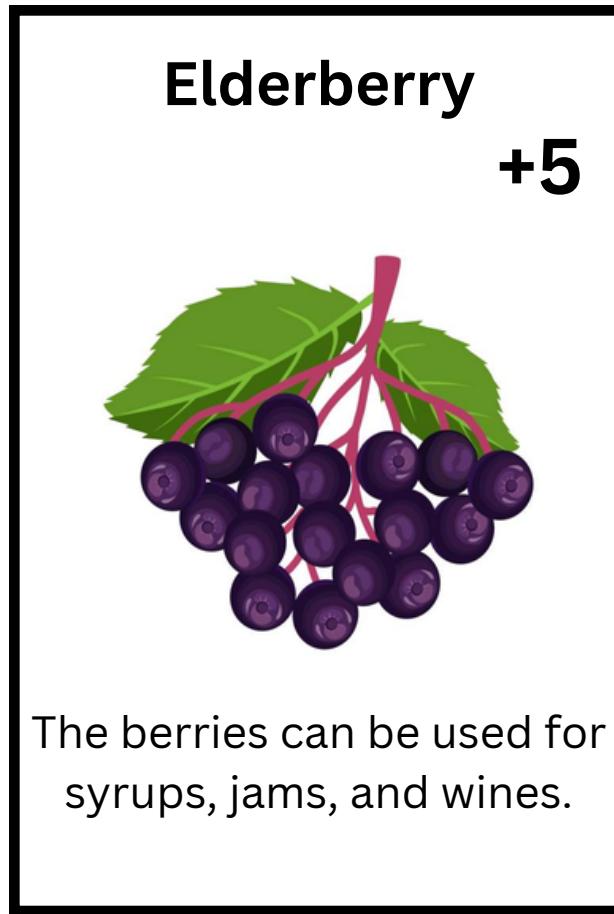
Prototype 3 cards

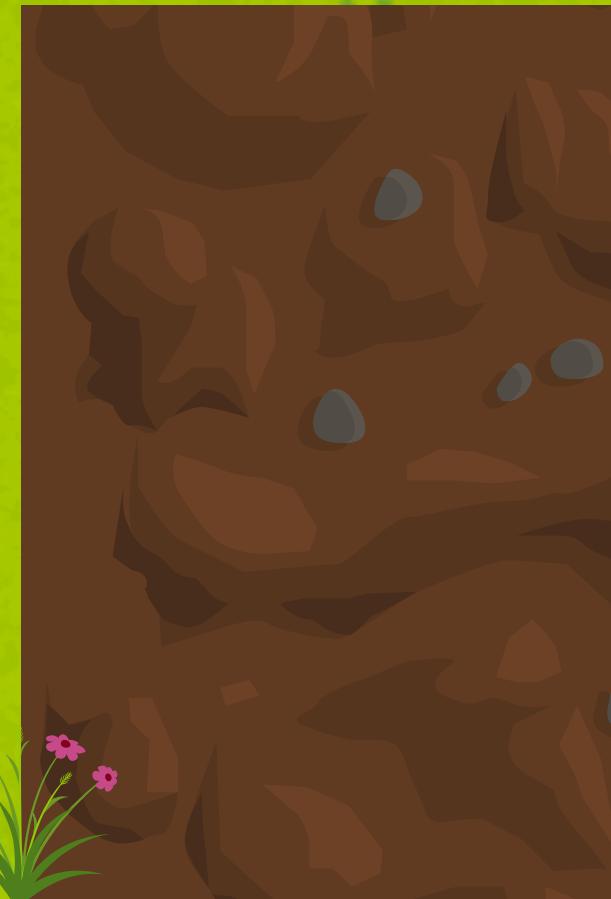
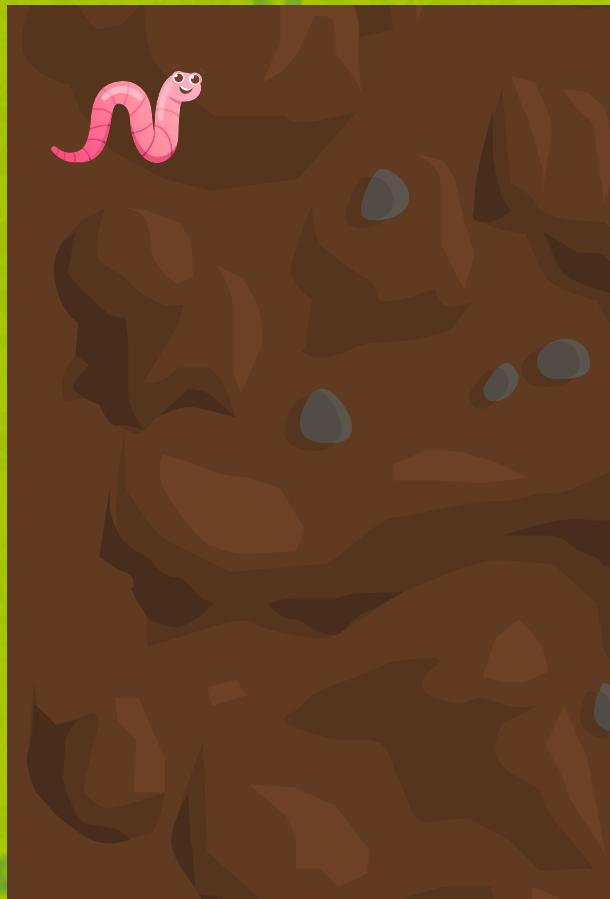
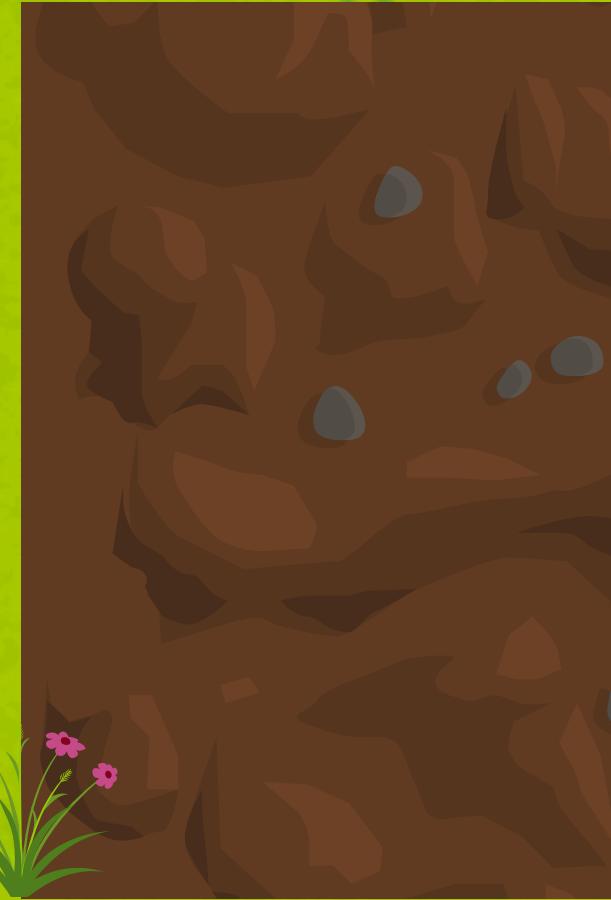
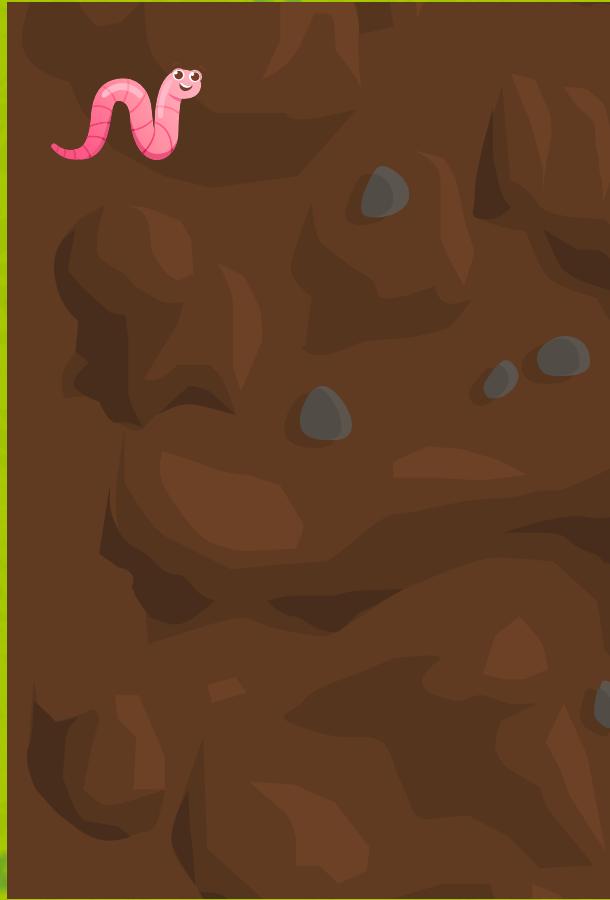


Prototype 3 cards



Prototype 3 cards





Flourish & Foes Rules

- **START:** Place your empty gardens in front of you and distribute 2 cards to each player
- On each turn player takes a card from the face-down deck and either:
 - plays an insect card into the discard pile
 - places a plant card into their garden
- 3 types of plant cards
 - native - give + points
 - invasive - give - points
 - non-native - give 0 points but also provide a powerup
- The game ends once any player has 4 plants in their garden
- The player with the most “ecosystem points” at the end of the game wins

What does native or invasive mean?

- **Native Plants:** These are plants that naturally occur in a specific region or ecosystem. They have adapted over time to local soil, climate, and wildlife, and they play a crucial role in supporting local biodiversity, providing food and habitat for native animals and insects.
- **Nonnative (or Introduced) Plants:** These plants are brought from other regions or countries, intentionally or accidentally. While they don't naturally belong to the area, many nonnative plants can coexist without causing harm to the local ecosystem.
- **Invasive Plants:** Invasive plants are a subset of nonnative plants that spread aggressively, often outcompeting and displacing native species. They can disrupt ecosystems, harm native wildlife, and alter habitats, often with negative ecological and economic impacts.

Client feedback on Prototype 3

Reflection

It seems the most important takeaway from the client feedback was the fact that it seemed like all insects were bad, even though insects should be a good thing that are important for the ecosystem. I really like the idea, but it will be hard to implement, since I wanted these insect cards to be the ones that cause chaos in the game and provide an element of fun and strategy.

Things I changed going into Final Prototype in response:

- Made it so that if a pollinator card is played -> will “double” some card, making it the same other card in your garden
 - this way insects can be viewed as more positive, since they can double the amount of native plants in your garden
 - this also mimics the actual role of pollinators in the ecosystem

Notes from client:

- Working most effectively
 - values with the points - showing the player the value of native plants vs invasive species -> reinforces the idea that we want even in players that do not know anything going into the game
- Impact: 2
 - summarizes the idea
 - would change: insects are viewed as bad -> but instead the players should also learn that the insects can be good
 - Maybe the player can get positive points when an insect is played?
- Relevant: 1
 - totally relevant
- Game concept: 2
 - pretty clear as far as what you need to do
 - unclear: is it competitive?
- Balanced vs overwhelming: 2
 - except for the insect thing
- Efficient to time-consuming: 3
 - not sure, how long it would take
 - MAKE SURE TO TEST WITH WIDE VARIETY OF AUDIENCES

Playtest of Prototype 3

Reflection

This was my first playtest with more than 2/3 people - I had 4 players. Even with this amount of players, it took 15 minutes to end the game and declare a winner, so the time bound is still met. I got a lot of great feedback regarding how clear the instructions are, since I only provided them with my instruction sheet and did not explain anything myself. One player understood everything quickly and started strategizing. Another player was confused and started planting insects into her garden rather than discarding them into her discard pile. I also got a lot of feedback regarding some of my specific cards, such as the ladybug card, which is useless for most of the game until the aphid card is played. We also noticed that some things cause players to lose more cards, thus them sometimes being at a disadvantage since they have less cards than others.

Things I changed going into Final Prototype:

- Made it so that if a pollinator card is played -> will “double” some card, making it same other card in your garden
 - this way insects can be viewed as more positive, since they can double the amount of native plants in your garden
 - this also mimics the actual role of pollinators in the ecosystem
- Added in the rule that a player draws UP to 3 cards so that no one is at a disadvantage
- turned ladybug into a general protection plant that can protect against more than just the aphid card

GG : PROTOTYPE 3

- fun game, easy to understand and quickly playable
- good theming and tie to the problem

E

- a lot of laughing because one player kept getting unlucky and only getting invasive cards
- players planted insect cards into their garden
- “what is an aphid?”

O

- someone felt like a card was useless because it could be used against a single card, that was not that common
- players were confused as to why they couldn't plant insect cards because there is no clear distinction?

T

- fix instructions
- add an insect instruction manual
- player's should take UP to 3 cards
- Pollinators should DOUBLE plants → MAKE THEM POSITIVE
- turn ladybug into general protection OR increase # of aphid cards

A

Exciting Ecosystem

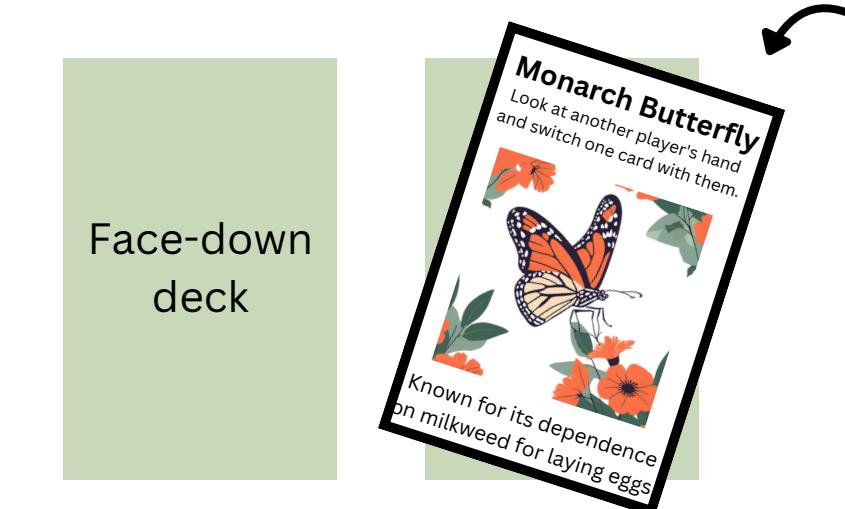
FINAL PROTOTYPE

Rules

- START:** Place your empty gardens in front of you and distribute 2 cards to each player
- On each turn player draws cards from the face-down deck such that they have 3 and either:
 - plays an insect card into the discard pile
 - places a plant card into their garden
- 3 types of plant cards
 - native - give + ecosystem points
 - invasive - give - ecosystem points
 - non-native - give 0 ecosystem points but also provide a powerup
- The game ends once any player has 5 plants in their garden
- The player with the most “ecosystem points” at the end of the game wins



Short fact at the bottom of each card helps educate audience a bit



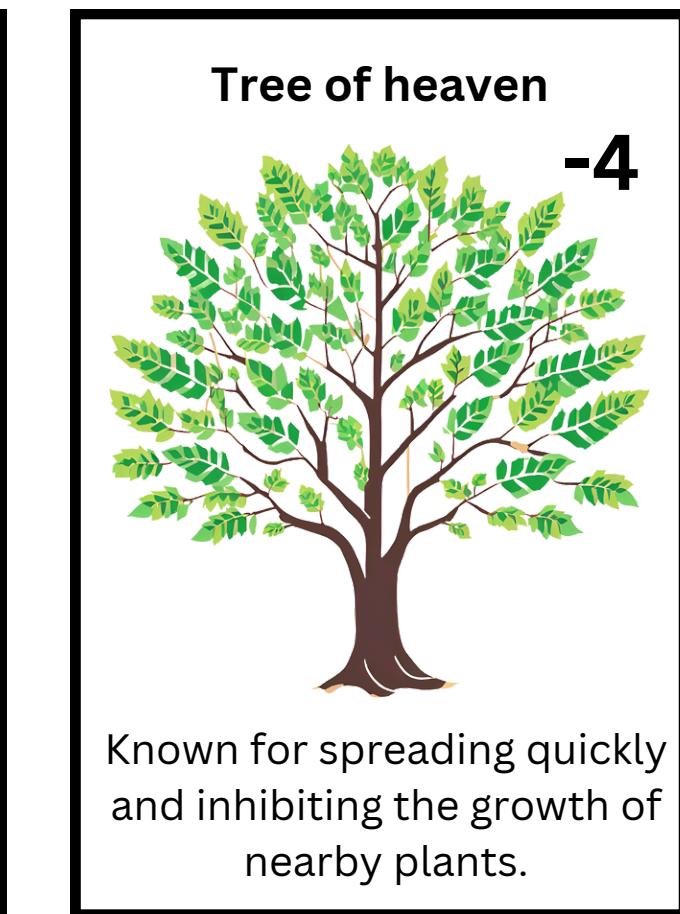
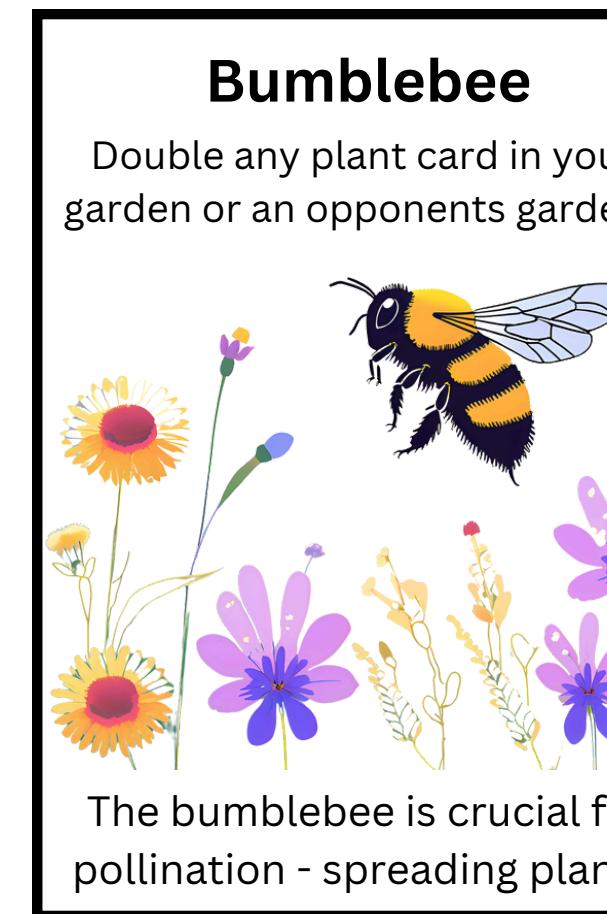
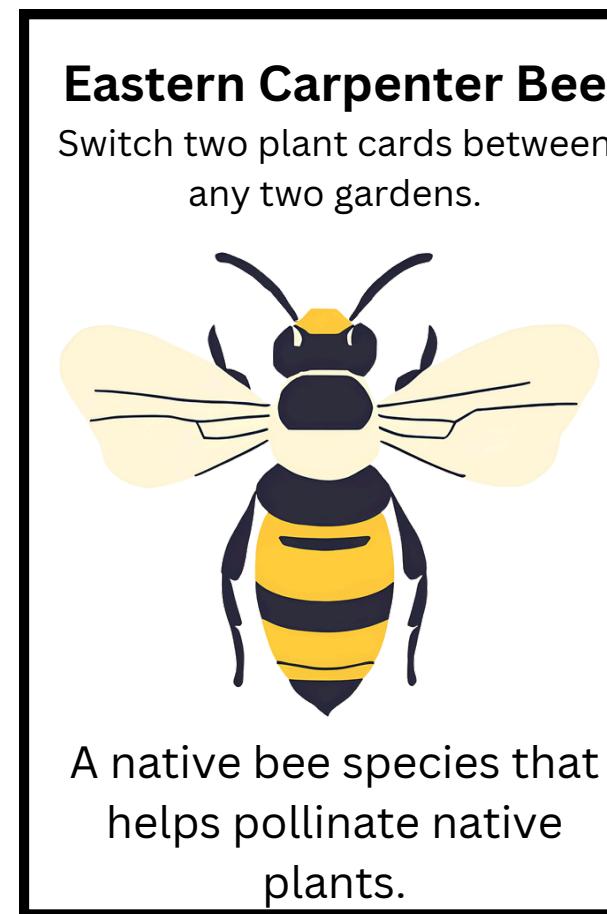
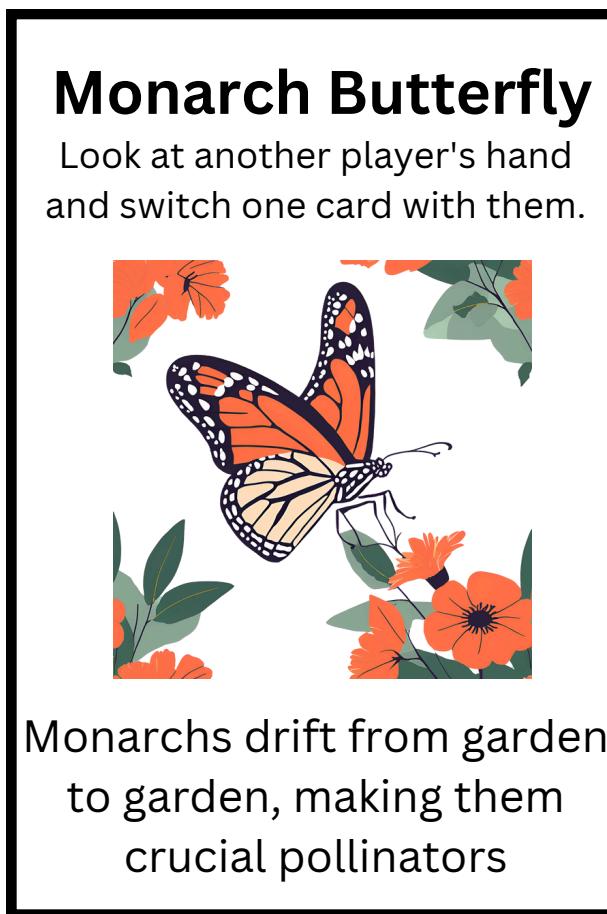
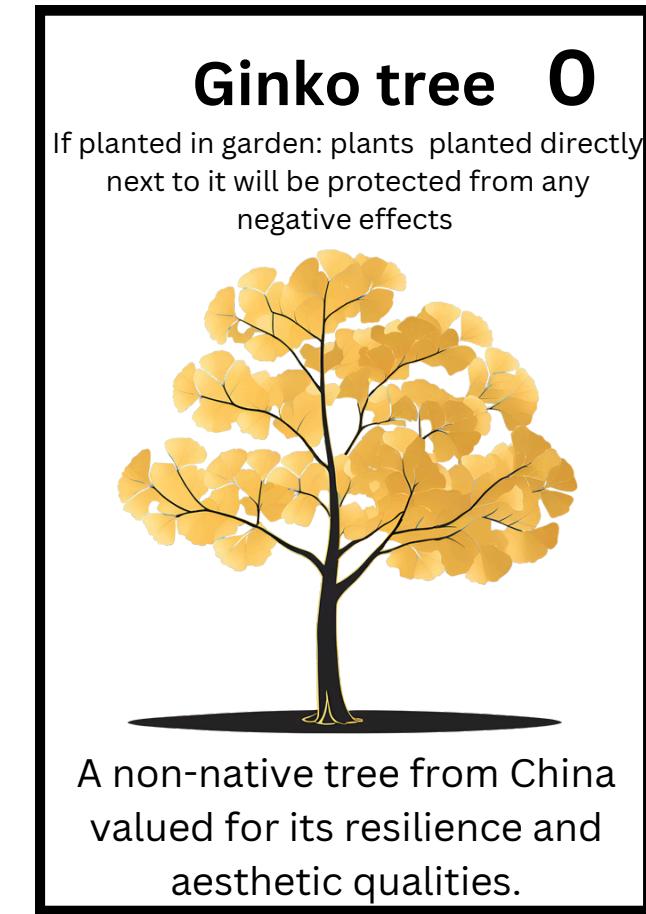
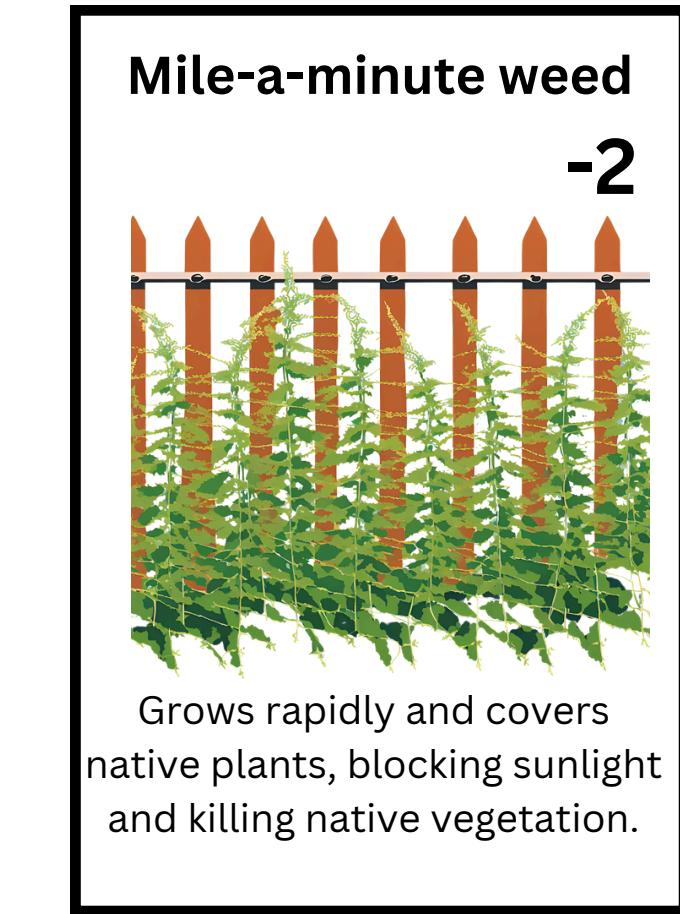
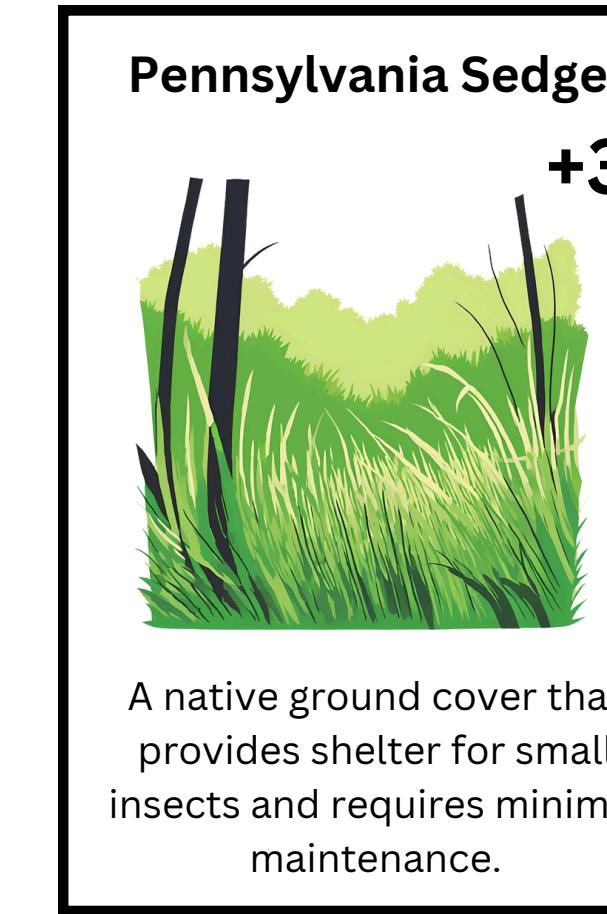
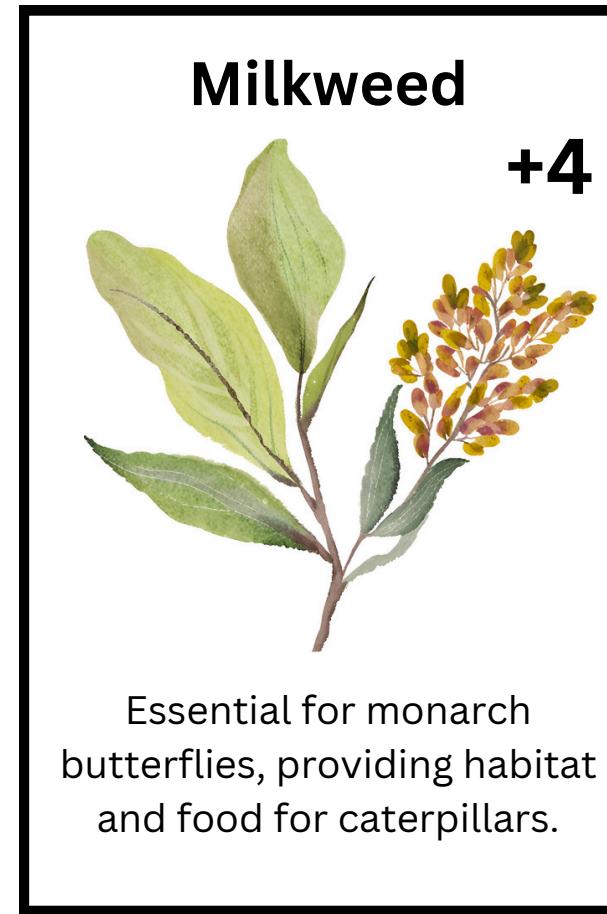
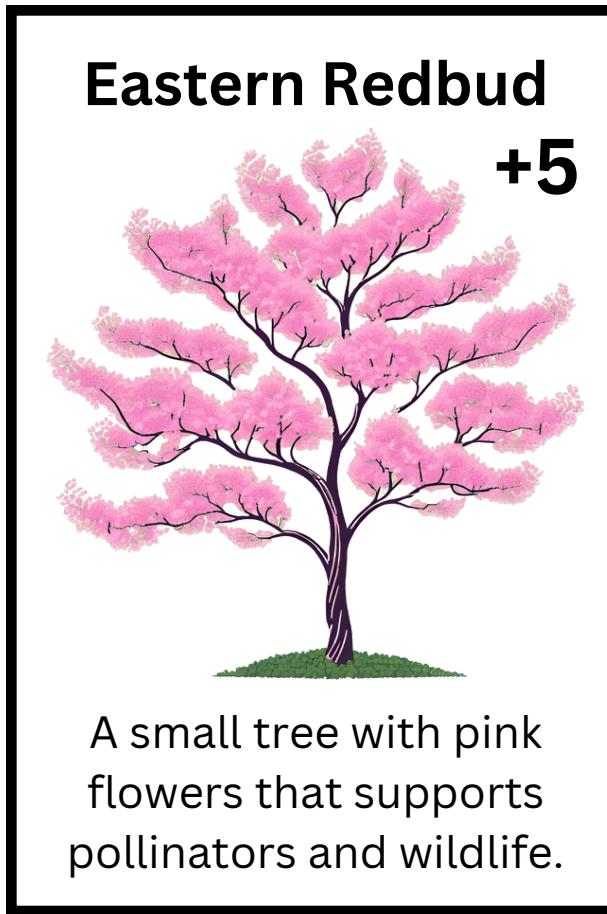
The discard pile, where the player plays insect/wildlife cards that allow them to for example exchange cards with another player.



Non-native plants but not invasive plants provide 0 points, but give the player an ability, such as being able to discard plants from your garden => it is still beneficial to plant non-native plants

Description: Garden Guardians is a strategic card game inspired by Unstable Unicorns, where players compete to cultivate the most vibrant and diverse garden using plant and pollinator cards. The game encourages interaction, strategy, and a bit of chaos, as players can influence each other's gardens while building their own.

Prototype 3 cards



Prototype 3 cards

Crab Spider

Play this to protect your plants against any insect card



They don't use webs to catch prey; instead, they ambush insects like bees and flies that visit flowers, often lying in wait on petals.

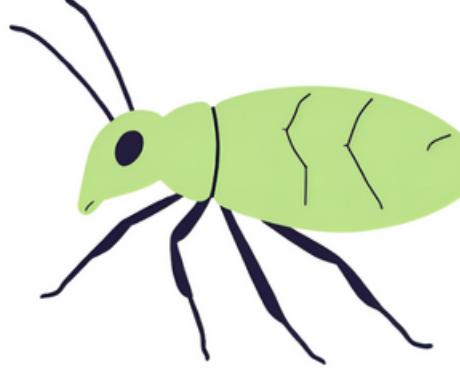
Caterpillar

Eat one plant planted in a garden. Could be yours, or your opponents!



Aphid

Infestation! Kill two of your opponents plant cards in their garden.



Tiny, sap-sucking insects that feed on plants, often causing damage by weakening plants.

Ladybug

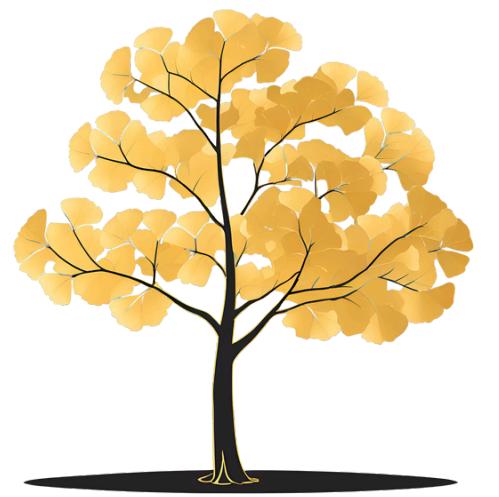
Double any plant card in your garden or an opponents garden.



Ladybugs are great pollinators. They travel from garden to garden to gather food.

Ginko tree 0

If planted in garden: plants planted directly next to it will be protected from any negative effects



A non-native tree from China valued for its resilience and aesthetic qualities.

Monarch Butterfly

Look at another player's hand and switch one card with them.



Monarchs drift from garden to garden, making them crucial pollinators

Eastern Carpenter Bee

Switch two plant cards between any two gardens.



A native bee species that helps pollinate plants, exchanging pollen between gardens.

Bumblebee

Double any plant card in your garden or an opponents garden.



The bumblebee is crucial for pollination - spreading plants.

Hummingbird

Draw an extra plant card from the deck. Your opponent won't even notice.



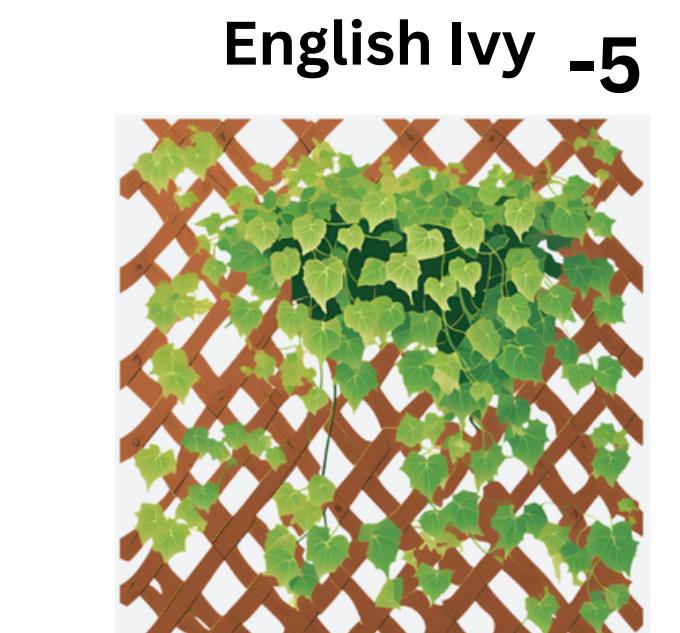
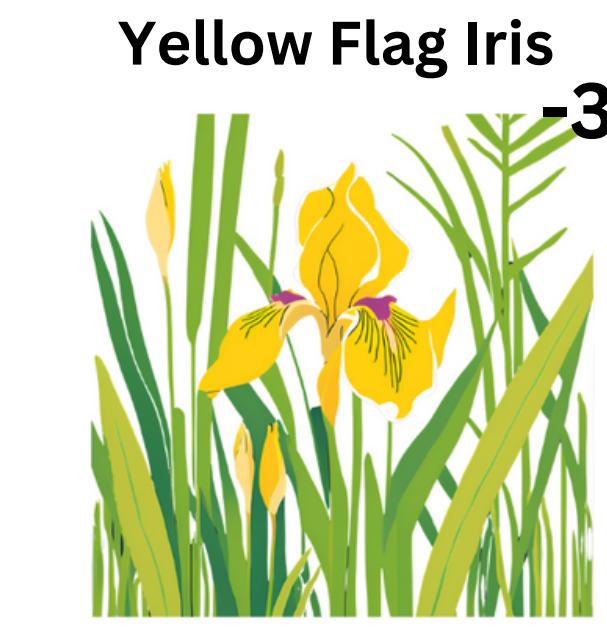
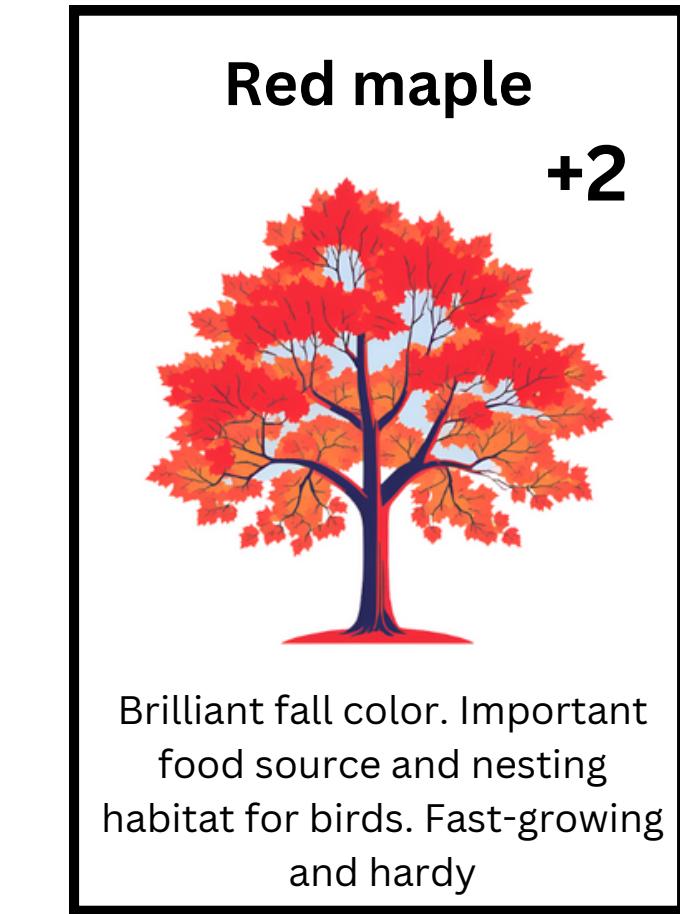
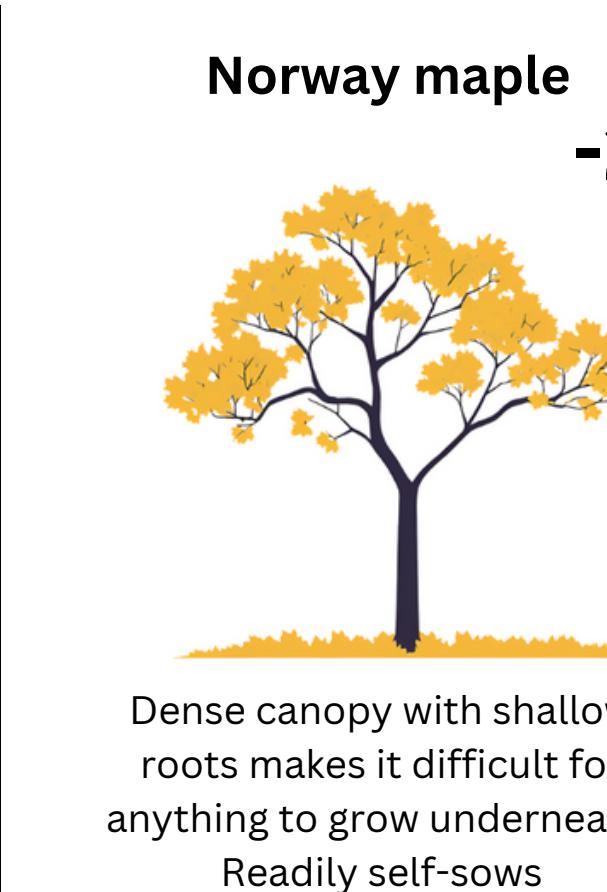
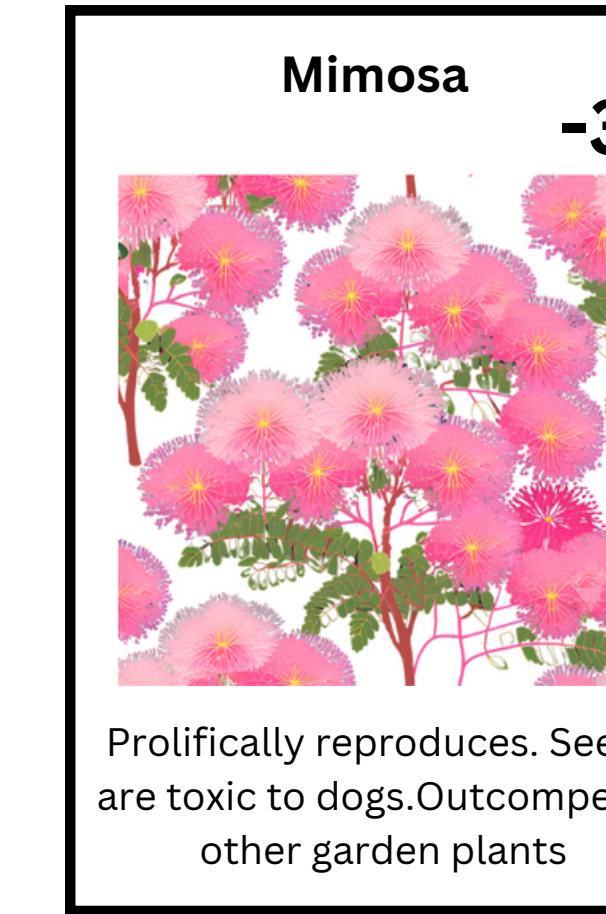
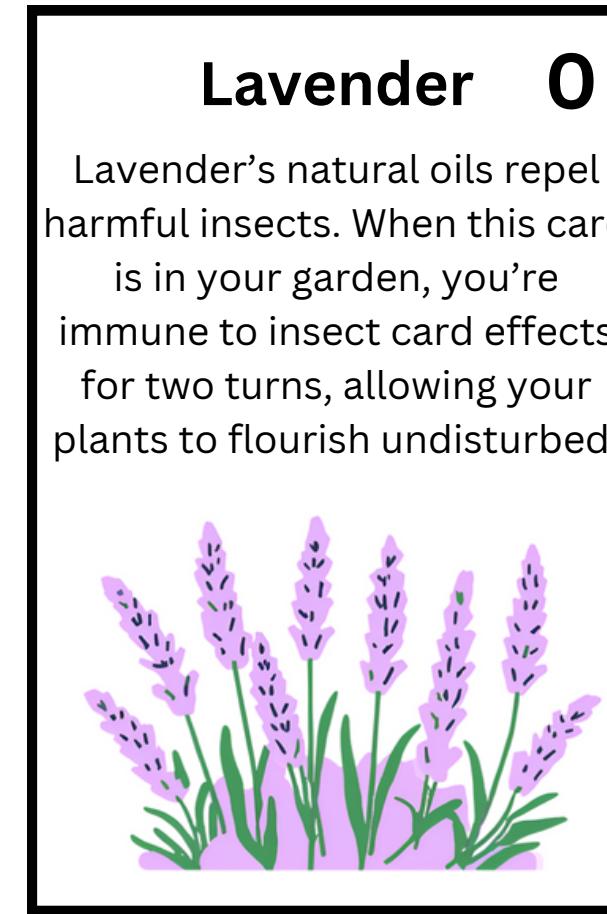
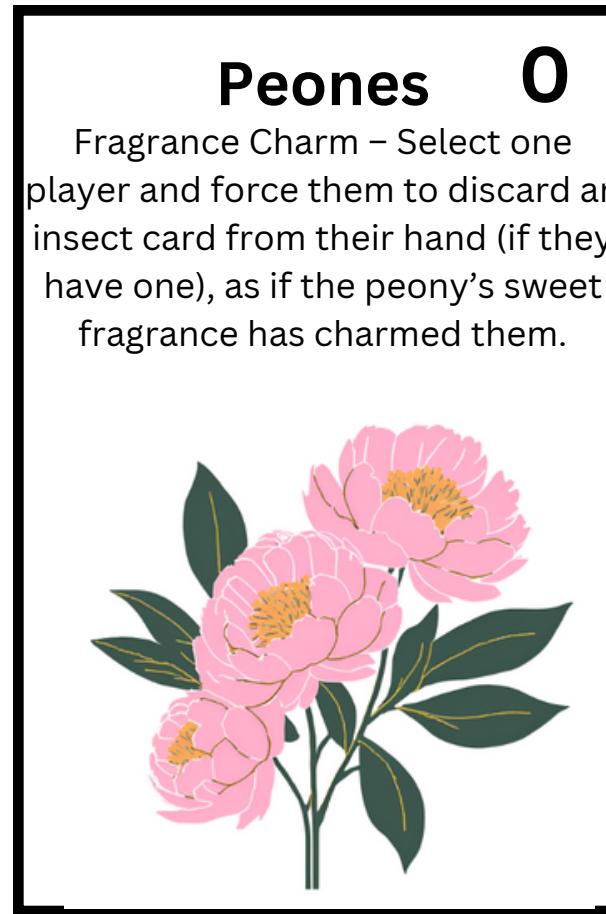
Hummingbirds are fast movers, pollinating flowers as they suck nectar.

Deer

Snack time! Choose one plant card from an opponent's hand and place it in the discard pile.



Prototype 3 cards



Prototype 3 cards

Elderberry

+5



The berries can be used for syrups, jams, and wines.

Strawberry

+4



Produces small, sweet strawberries that you can make into jams and syrups or tarts.

Hostas

0

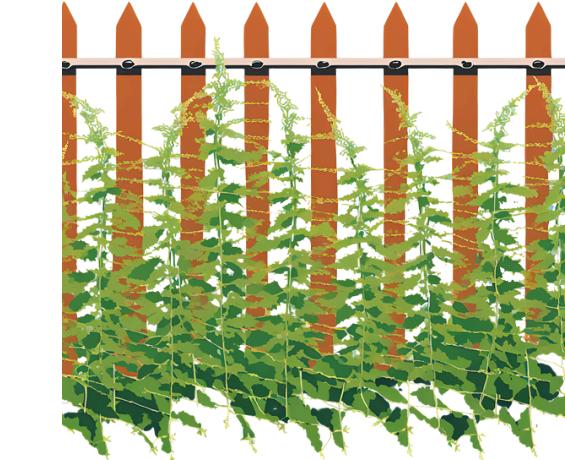
When planted in garden:
Immediately plant one extra card
on your turn.



They quickly establish themselves in various garden conditions and are easy to grow.

Mile-a-minute weed

-2



Grows rapidly and covers native plants, blocking sunlight and killing native vegetation.

Peach

0

When planted in garden: Select another player and have them reveal their hand to you.



Native to China, widely cultivated for its juicy fruit with irresistible sweetness that "attracts" others.

Monarch Butterfly

Look at another player's hand and switch one card with them.



Known for its dependence on milkweed for laying eggs.

Eastern Redbud

+5



A small tree with pink flowers that supports pollinators and wildlife.

Milkweed

+4



Essential for monarch butterflies, providing habitat and food for caterpillars.

Blueberry

+2



Thrives in acidic soils and produces sweet, blue berries.

Multiflora Rose

-3



Originally introduced as an ornamental plant, it now dominates fields and forests.

Exciting Ecosystem Rules

- **START:** Place your empty gardens in front of you and distribute 2 cards to each player. Place the rest of the cards facedown in the middle of the table. Set the “DOUBLES” pile aside
- On each turn player draws cards from the face-down deck until they have 3 and either:
 - plays an insect card into the discard pile
 - places a plant card into their garden
- 3 types of plant cards
 - native - give + ecosystem points
 - invasive - give - ecosystem points
 - non-native - give 0 ecosystem points but also provide a powerup
- The game ends once any player has 5 plants in their garden
- The player with the most “ecosystem points” at the end of the game wins

What does native or invasive mean?

- **Native Plants:** These are plants that naturally occur in a specific region or ecosystem. They have adapted over time to local soil, climate, and wildlife, and they play a crucial role in supporting local biodiversity, providing food and habitat for native animals and insects.
- **Nonnative (or Introduced) Plants:** These plants are brought from other regions or countries, intentionally or accidentally. While they don't naturally belong to the area, many nonnative plants can coexist without causing harm to the local ecosystem.
- **Invasive Plants:** Invasive plants are a subset of nonnative plants that spread aggressively, often outcompeting and displacing native species. They can disrupt ecosystems, harm native wildlife, and alter habitats, often with negative ecological and economic impacts.

