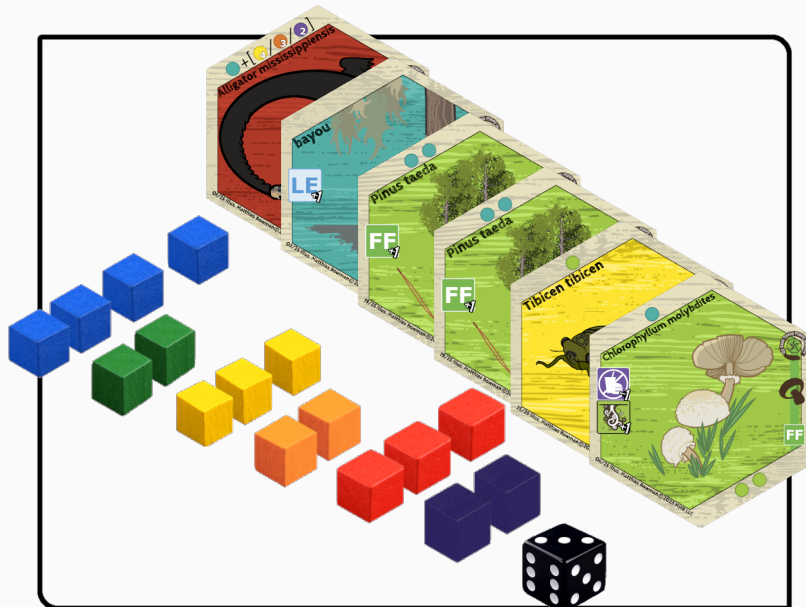




# what do I need to play?

To play kCaloria you will need:

- (60) tiles, with no more than 5 copies of any tile with the same name
- (16) blue kCalorie cubes
- (16) green kCalorie cubes
- (16) yellow kCalorie cubes
- (16) orange kCalorie cubes
- (12) red kCalorie cubes
- (12) purple kCalorie cubes
- (5) counting dice



## how do I start?

As kCaloria has no board and can be played anywhere, depending on the number of players, the start configuration will change. You will always start (5) tile spaces away from the next closest player. In a 2-player game you will use the A-B configuration (shown below), a 3-player game will have the A-B-D layout, and a 4-player game will have the A-B-C-D layout.

Each player will shuffle their stack of (60) tiles and then place their draw-pile next to themselves, facing down. The game begins with players drawing (7) tiles from the top of their draw-pile. If you don't draw a **water resource** tile initially, redraw and try again. Return the old hand to the bottom of your stacked deck. kCaloria is about building intricate food chains - not bad luck! What do all lifeforms on earth require? Water. You will spend your first turn building the foundation of your food chain by placing a **water resource** tile.



So who plays first? The player who has most recently gone camping makes the first move, or simply the player who has the highest roll of a die. Turns progress in clockwise order.

After the first player makes their move, the next player must place their first tile anywhere (5) tile spaces away. Players three and four will follow this rule to create a layout as pictured.

When you place your tiles, ensure that you can read the text and symbols of your tiles as each player will orient their own tiles differently. After you've placed your first tile, use the included tile holder insert to quickly measure where the next player places their first tile. Repeat this step until everyone has made their first move, then everyone will return the facedown spacing tiles to the bottom of their deck.

# what is the objective?

The objective of kCaloria is to build the most developed ecosystem. You develop your ecosystem by placing tiles that contribute to its total kCalories. The type of tile is determined by its background color.

water resource tiles produce blue kCalories worth 0 points.

fungi/plant tiles produce green kCalories worth 1 point.

herbivore tiles produce yellow kCalories worth 2 points.

omnivore tiles produce orange kCalories worth 3 points.

carnivore tiles produce red kCalories worth 4 points.

human tiles produce purple kCalories worth 5 points.

microbe tiles produce no kCalories, but affect adjacent tiles.

event tiles (weather, actions, etc.) produce no kCalories, but affect adjacent tiles.

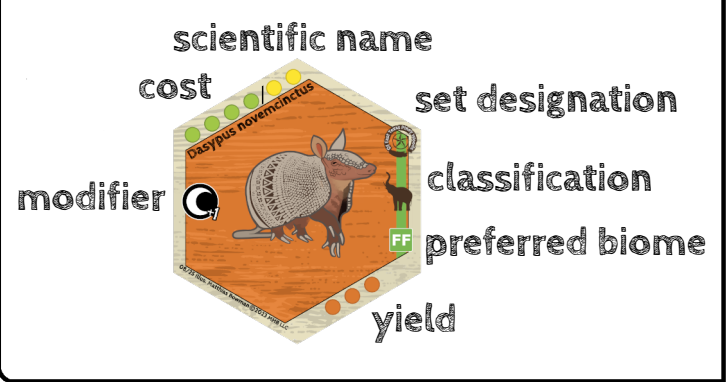
In order to score the greatest amount of points, you must create a suitable environment for tiles higher up the food chain. In order to play human or carnivore tiles, there must be sufficient water resources, fungi/plant, herbivore, and omnivore tiles that satisfy that tile's cost.

As you place tiles, you will contribute kCalories to your ecosystem. At the end of the game each player will count the points from the unused kCalories on their tiles. The player with the most points wins the game.

# what does my turn look like?

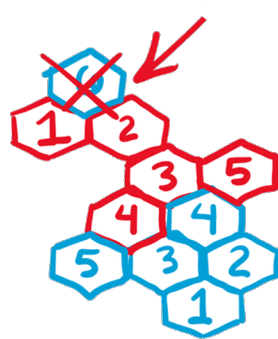
Your turn will have the following steps:

- Place a new tile from your hand onto the table.
- If the new tile has a cost, pay the cost.
- If the new tile has a yield, place its yield on top of the new tile.
- If the new tile has an effect or is placed next to any other tiles with effects, resolve the effect.
- Draw a new tile replenishing your hand back to (7) tiles.
- You can always discard and draw up to (3) new tiles, ending your turn. Discarded tiles are put to the side face-down in a seperate pile, unable to be played for the remainder of the game.



You and your opponent will alternate placing tiles as you build your respective food chains from simple water resource tiles to complex carnivore and human tiles. Once you begin spreading out from your start locations, you will eventually end up competing for each other's resources.

You can only place a tile adjacent to a tile you have already played, unless your tile has a special modifier that says otherwise.

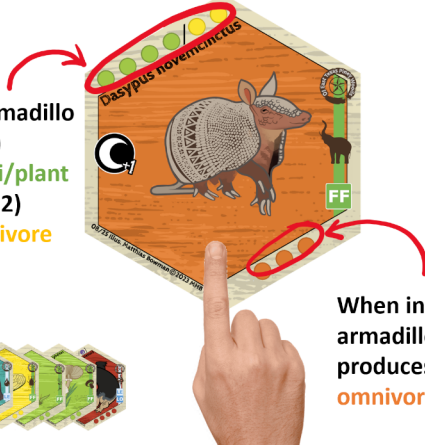


Every tile you place should be placed contiguously from your starting position shown here at position 1. Every subsequent move played should connect back to your food chain, unless a modifier allows this.


# what does my turn look like? (examples)

To start the game, you will place a tile from your hand onto the table. However, in this example, placing the armadillo tile first would be an illegal move.

To play the armadillo tile it costs (4) adjacent **fungi/plant** kCalories OR (2) adjacent **herbivore** kCalories




When in play, the armadillo tile produces (3) **omnivore** kCalories




In order to play more complex tiles, the required cost of colored kCalorie counting cubes must already be on the board adjacent to where you want to play.

This bayou **water resource** tile produces (2) **water resource** kCalories (the colored counting cubes)



This Phlox nivalis **plant** tile requires (1) **water resource** kCalorie adjacent to play and yields (2) **plant** kCalories



Begin the game by placing a water source tile which has no cost to place and is therefore a legal move. End your turn by drawing a new tile to bring your hand total back to (7).

What about the next turn? You will alternate placing tiles with your opponent(s) and expand your respective food chains to dominate the table! What should you do on your next turn? Why, play a **fungi/plant** tile of course! After all players place their first tile, every subsequent tile must be placed adjacent to one of your previously placed tiles.

Note: the cost of your tile can be paid using ANY adjacent tile, even if the tile belongs to another player!

This mushroom tile has a cost of (1) adjacent **water resource** kCalorie. Fortunately, there are (2) available **water resource** kCalories at all the highlighted locations.

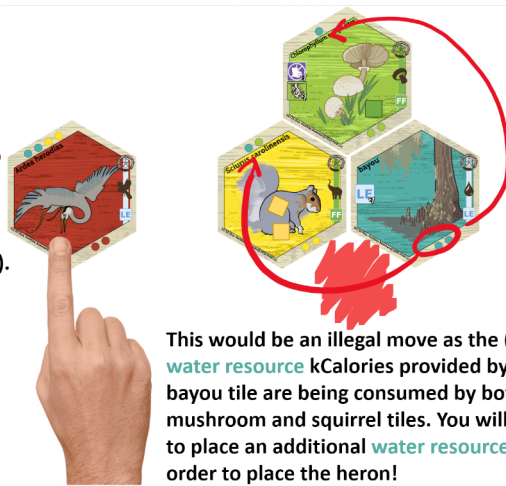


Once your new mushroom tile is placed, remove the required amount of **water resource** kCalorie tokens from the bayou tile to pay its cost. Don't forget to add the 2 new **plant** kCalories that were created though!

On your next turn you want to place a squirrel tile. This has a cost of (1) adjacent **water resource** kCalorie and (1) adjacent **fungi/plant** kCalorie. The hexes that satisfy this adjacency cost are highlighted.



On the following turn you attempt to play your heron tile (costing 2 adjacent **water resource** and **herbivore** kCalories).



This would be an illegal move as the (2) **water resource** kCalories provided by the bayou tile are being consumed by both the mushroom and squirrel tiles. You will need to place an additional **water resource** tile in order to place the heron!

Now that an additional **water resource** tile has been placed, there is one appropriate location that satisfies the heron's cost.





You will continue to place your tiles anywhere and everywhere- quickly building your fledgling food chains into robust ecosystems, competing for resources, and earning as many kCalories as possible. The game ends when:

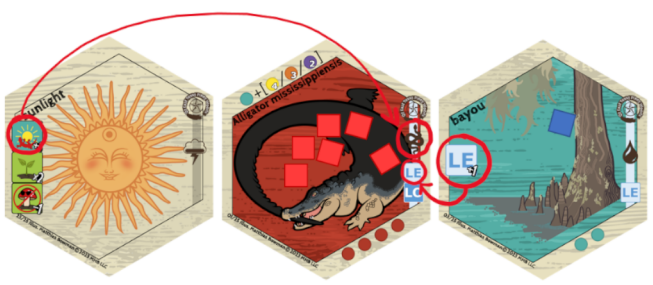
- you have successfully placed your second **human** tile
- or
- you have run out of your original (60) tile set

This triggers the game ending and final points are tallied from all unused kCalories each player has remaining on the table. The player with the highest score has dominated all opponents to have their food chain reign supreme and wins the game!

some additional rules

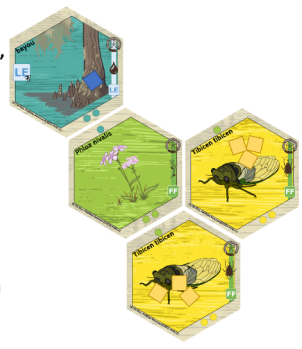
A tile's scientific name, their classification, as well as their preferred biome may all be used to refer to specific adjacency effects. Adjacency effects can either increase or decrease neighboring tile's outputs based on tile modifiers. If a tile has a modifier icon, it means there are additional adjacency effects to consider when placing. These can be additional yield from neighboring weather tiles, food sources, etc. Refer to the modifiers page for a complete list and their effects.

Some tiles like "sunlight" have multiple modifiers that can affect a variety of tiles. Modifiers can affect tiles based on their classification, like how "Alligator mississippiensis", being a reptile, gets an additional yield due to the sunlight's cold-blooded modifier. Other tiles like "bayou" have modifiers that affect tile's preferred biomes, known as a biome boost, when they match (see below).



Placing like animal tiles together to produce a greater yield also works for neighboring opponent pieces too. It's a double-edged sword- increase your own tile yields at the cost of helping your opponent!

Over the course of a game of kCaloria, like real life, when you place two of the same animal next to one another, they can multiply! For any adjacent animal that shares the same name, you can add +1 to each respective tile's yield.



Note that some tiles, like this frog tile, yield multi-colored kCalories. When receiving a bonus, a player can choose which color kCalorie to produce from the colors that it normally produces!



Here you have placed two sunlight tiles next to a flower tile. Sunlight's photosynthesis modifier adds an additional base yield to any adjacent plant tiles. This single plant tile's initial base yield of (2) plant kCalories receives (4) additional kCalories from the adjacent sunlight tiles!

These additional kCalories allow it to pay for more herbivore tiles than normally allowed. Just be careful of sunlight's other modifier that reduces adjacent fungi tile's yield!



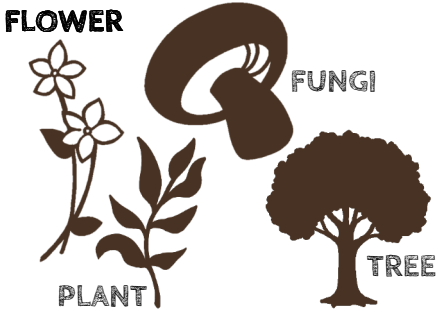
Make sure to pay attention to tiles that have already been placed- you can maximize the amount of kCalories you produce with careful planning!



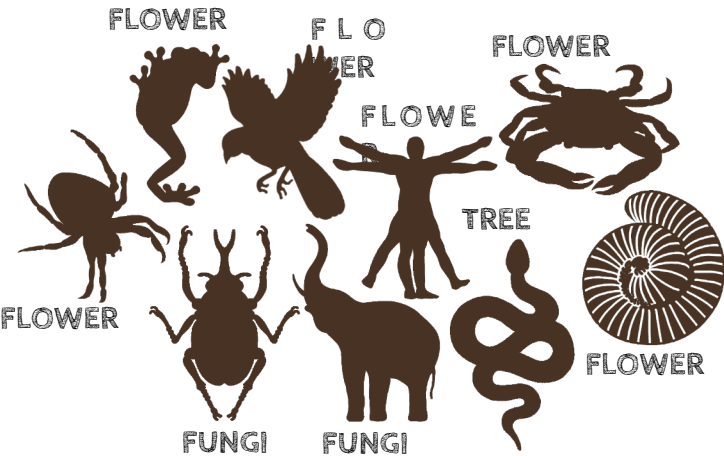
# tile classifications



**WATER RESOURCE:** Water resources are as varied as they are plentiful. From flowing rivers to blessed rain, tiles with this classification yield **blue kCalories**.



Tiles with these classifications breathe for the earth. Flowers, plants, and trees bask in sunlight photosynthesizing while fungi prefer the shade, content recycling nutrients. These tiles yield **green kCalories**.



These tiles scurry, fly, swim, and stride. They are the **herbivores**, **omnivores**, **carnivores**, and **humans**.



**MICROBE:** The smallest of creatures you will encounter, often times microbes can have the largest impact in an ecosystem. Microbes produce no kCalories but affect adjacent tiles.



**EVENT:** From devastating earthquakes to powerful hurricanes, event tiles regularly reshape ecosystems in their image. These tiles may produce kCalories and greatly affect adjacent tiles.



**ACTION:** Actions speak louder than words. Action tiles can quickly alter an environment by affecting adjacent tiles. Action tiles dissapear from food chains after the turn in which they are played.

# biomes

The world is full of diverse and magnificent ecosystems, home to countless different species specifically adapted to their surroundings. From bountiful tropical rainforests to the rugged windswept taiga, biomes play a large role in creating your perfect food chain.

Plan your next moves carefully! Be sure to take advantage of the adjacency effects of the many different biomes available to you in kCaloria. With shrewd planning and some luck, you can build a sprawling food chain that takes advantage of the biome boost mechanic to the fullest!



These modifiers appear on tiles that create the backbone of an ecosystem. When placed, tiles with this modifier add +1 kCalorie to the yield of all adjacent tiles with matching biome icons. Biome boosters can even affect each other!

Tiles have a preferred biome in which they can thrive, shown below their classification icon. Other tiles may create the backbone of these biomes and have corresponding modifiers. When this squirrel tile is placed next to the pine tree that has the floodplain forest biome modifier, the squirrel benefits and recieves an additional **herbivore kCalorie** yield!



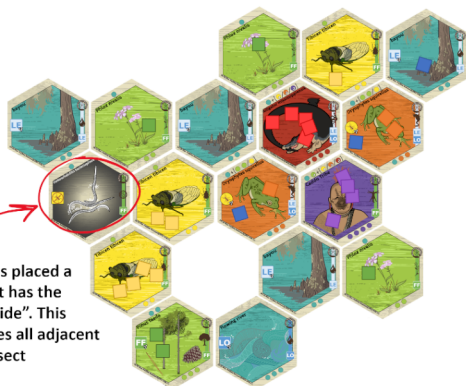
|    |                             |    |
|----|-----------------------------|----|
| 1  | grassland                   | GL |
| 2  | savanna                     | SV |
| 3  | shrubland                   | SH |
| 4  | semi-arid desert            | SD |
| 5  | hot & dry desert            | HD |
| 6  | coastal desert              | CD |
| 7  | cold desert                 | CL |
| 8  | tropical lowland rainforest | TL |
| 9  | cloud / montane forest      | CF |
| 10 | mangrove forest             | MF |
| 11 | tropical dry forest         | TF |
| 12 | temperate deciduous forest  | TD |
| 13 | temperate coniferous forest | TC |
| 14 | floodplain forest           | FF |
| 15 | alpine                      | AL |
| 16 | taiga / boreal forest       | TA |
| 17 | tundra                      | TN |
| 18 | lentic waters               | LE |
| 19 | littoral waters             | LI |
| 20 | lotic waters                | LO |
| 21 | coral reef                  | CR |
| 22 | oceanic waters              | OC |
| 23 | neritic waters              | NO |
| 24 | abyssal waters              | AO |



# advanced gameplay - extinction event

A cornerstone of kCaloria and ecosystems on earth, is the delicate balance a food chain must maintain between producers and consumers. If any of this is disrupted by the removal of a small insect or plant, the effects can have a devastating effect higher up the food chain - otherwise known as an Extinction Event!

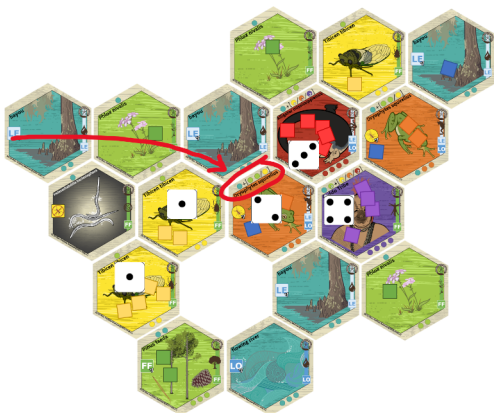
Here a food chain is shown that has developed over the course of a game.



A rival player has placed a microbe tile that has the modifier "Pesticide". This modifier removes all adjacent tiles with the insect classification.

After the microbe tile has been placed, its modifier "Pesticide" takes place immediately. Neighboring insect tiles are removed from the table at the end of your rival's next turn. As these insect tile's **herbivore kCalories** formed the backbone of your ecosystem, you're now faced with an extinction event!

Use counting dice to mark how many turns away a tile is from being removed from the game. Tiles to be removed at the end of your opponent's next turn (the cicadas) start at 1. Tiles that depended on those tiles for their cost are 2 counters away from removal, and so on. When your insects are no longer in the food chain, the kCalorie cost of your frog tile will no longer be met!

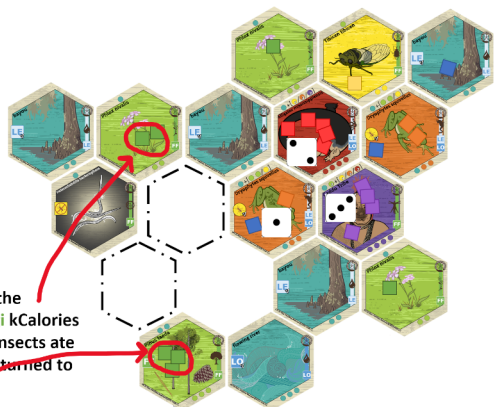


Every turn the Extinction Event continues, dice values decrease by 1. When the value reaches "0", the tile starves and is removed.

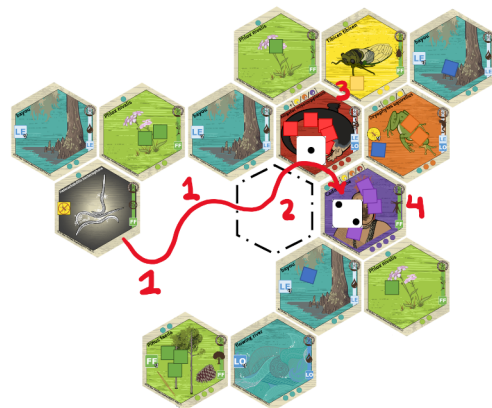
Every subsequent tile that was built from your insects now faces starvation, and will be removed in sequence at the end of every of your opponent's turn unless an adequate replacement kCalorie source can be found.

At the end of your opponent's next turn your **herbivore** insect tiles are removed. This puts your **omnivore** frog tile in danger of starvation and will be removed at the end of your opponent's next turn if you cannot find replacement kCalories.

Note that the **plant/fungi** kCalories that your insects ate are now returned to the game.



The extinction event continues if no tile is placed to satisfy the **carnivore** tile's cost. This continues each turn until the extinction event burns through the food chain OR a player can place a tile that satisfies a starving (kCalorie deficient) organism in time. Having extra kCalories supplying your **carnivore** and **human** tiles can help protect against these punishing events!



## (Extinction Event case #2)

Now let's say that our food chain was laid out differently. In this scenario an opponent has played a "remove the invader" action tile instead of a microorganism as before.

As with any other tile, action tiles need to be placed next to tiles that the player already owns. For this example we assume the "remove the invader" tile was placed legally.

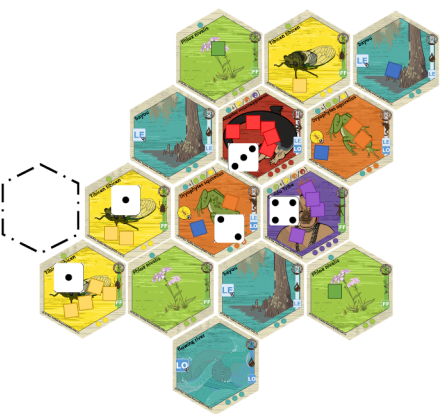
With this tile, your opponent states the name of any adjacent tile (the only rule being that such a tile needs to have a cost e.g. cannot be a **water resource** or "sunlight" tile). They select "Tibicen tibicen", and as there are (2) such tiles adjacent, both will be removed.







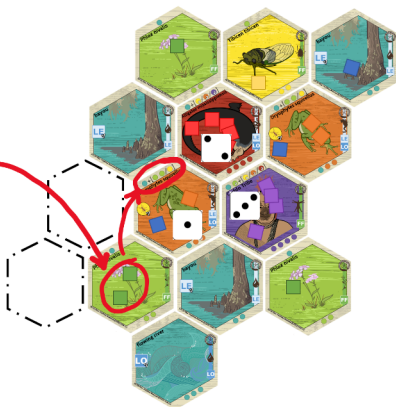
Action tiles exist only temporarily on the board (different than tiles with the temporary modifier) and so are removed immediately at the end of that player's turn. The consequence of the action, however, remains. Both "Tibicen tibicen" will now be removed at the end of the rival player's NEXT turn.



At the end of the rival player's next turn, your insect tiles are removed and your "Dryophytes squirellus" tile is facing starvation as the herbivore kCalories it was receiving no longer exist.

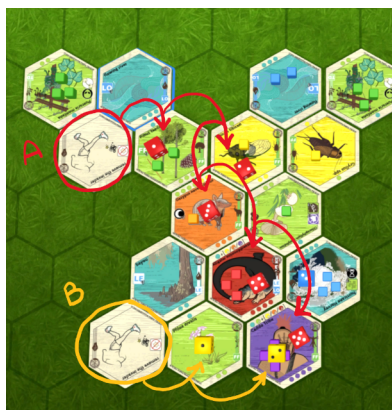
Note that the plant/fungi kCalories that your insects ate are now returned to the game. It is in this moment, BEFORE the next player's turn, that the player who's tiles were removed MAY re-allocate kCalories returned to the food chain. This action does not count as a turn.

While the "Tibicen tibicen" tiles were removed, in this configuration the frog tile can substitute its cost with the new adjacent herbivore kCalories. Crisis averted! Remove the collapse counter dice and continue building your biome!



## some scenarios

Multiple collapses can occur simultaneously within an ecosystem. It is important that the player initiating the collapse use their own dice to keep track. When multiple dice are placed on a tile, the lowest value takes priority. Remember to adjust only your own counting dice at the end of your turn!



Opponent A has placed a "remove the invader" tile that triggers an ecosystem collapse shown in red. The human tile is (5) turns away from starvation. Opponent B places a removal tile, shown in yellow, to eliminate the "Phlox nivalis". This puts the human tile only (2) turns away from starvation. Both collapses happen concurrently.

Sometimes it pays to be risky! Tiles can be placed within a collapsing ecosystem to earn last-minute points before an inevitable last turn, or simply to claim space before your opponent can.

On your turn, you can still place this human tile even though it will immediately enter the collapsing chain. Perhaps you plan to replace the grasshoppers with a squirrel when the space becomes available?



When a tile can't be saved and is removed from play, that tile's cost returns to the board. Removal happens at the end of a player's turn, so you will have to wait until your next turn to use those kCalories. Any player that is able to make a legal move can take advantage of the freed-up space and kCalories, so take care when allowing any of your tiles to leave the game!

If an ecosystem collapse has more stages than you have dice, you can either borrow those of your opponent or continually take dice from the beginning of the collapse as they leave the board and add them to the end.

Ecosystem collapses add a dynamic twist to biome-building that can quickly change a stagnant board and allow new life to flourish as easily as they can take life away. Beginners and younger audiences can choose to play kCaloria without needing to play with the ecosystem collapse mechanic until they feel more comfortable with gameplay. Tiles such as "remove the invader" would simply remove all available kCalories of a desired tile instead of remove the tile from gameplay.

Balance your food chain wisely, your strategic decisions and environmental stewardship will guide you. Remember, in kCaloria, you have the power to build your biome!





Modifiers are an integral part of kCaloria and can quickly alter the state of a game through careful planning. Maximize your score with tiles that synergize, or chip-away at your opponent's food chain with negative modifiers. The shape of modifiers are important! Circular borders affect the individual tile, squares affect other tiles!



**BARRICADE:** Tiles with this modifier can block opponents from placing their tiles adjacent to this piece for the duration indicated.



**DESTRUCTIVE (fungi/plants):** tiles with this modifier are perilous to any adjacent **fungi/plant** tiles. When placed adjacent, subtract -1 from any adjacent **fungi/plant** tile's yield.



**ECTOTHERM:** Ectothermic creatures regulate their body temperature from external sources. Tiles with this modifier benefit adjacent amphibian & reptile tiles, add +1 to those tile's yield.



**INEDIBLE (human):** inedible modifiers are dangerous sources of food for **humans**. If a **human** tile uses a tile with the inedible modifier for its kCalorie cost, subtract -1 to the yield of the **human** tile.



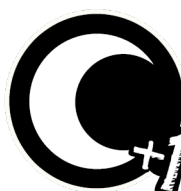
**INSECTIVORE:** Insectivores are animals that primarily receive their nutrients from insects. If a tile has the insectivore modifier, add +1 to that tile's yield when adjacent to insect tiles.



**INVASIVE SPECIES:** Tiles with this modifier can thrive in almost any climate and receive adjacency bonuses from all biome types.



**MYCORRHIZAL NETWORK:** Mycorrhizal networks connect **fungi/plant** tiles together to transfer water, nitrogen, carbon and other minerals. **Fungi** tiles with this modifier affect all adjacent **fungi/plant** tiles by increasing their yield by +1.



**NOCTURNAL:** Tiles with the nocturnal modifier receive +1 kCalorie to their yield when adjacent to moonlight.



**NOCTURNAL HUNTERS:** Tiles with this modifier affect all adjacent **carnivore** and **human** tiles by adding +1 to their output yield.



**PESTICIDE:** Tiles with the pesticide modifier remove all adjacent insect tiles from play. This action can harm as much as it can help if critical species in the food chain disappear as a result!



**PHOTOSYNTHESIS:** Tiles with this modifier affect adjacent **plant** tiles by doubling the base yield of their output. E.g. a normal **plant** tile yields (2) **plant kCalories**, but when modified by photosynthesis, yields (4) **plant kCalories**.



**PROMINENT CANINES:** Tiles with this modifier receive an additional +1 yield if their cost was paid from any **herbivore**, **omnivore**, **carnivore**, or **human** kCalories from an opponent.



**SHADE REQUIRED:** Tiles with this modifier reduce adjacent **fungi** tile's yield by -1. **Fungi** are not capable of photosynthesis like their **plant** counterparts, and instead breakdown organic compounds for sources of energy.



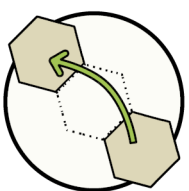
**SANGUIVORE:** When placed next to a tile with the mammal classification, this tile receives an additional +1 yield.



**TEMPORARY:** All good things must come to an end. Tiles that have the temporary modifier will lose -1 from their own kCalorie yield at the end of each turn unless they are used by adjacent tiles which locks-in their value.



**TIDAL INFLUENCE:** Tiles with this modifier affect adjacent **water source** tiles by adding +1 to their output yield.



**TRANSPLANT:** Tiles with this modifier do not need to be placed adjacent to your own tiles, but anywhere on the table. The tile's cost still needs to be paid.



**REMOVAL:** When a tile is placed with this modifier, declare a tile name to be removed (cannot be a tile that had no cost to play). Any number of tiles adjacent with this name will be removed at the end of your next turn. The removal tile is discarded after use.

