Submission 3

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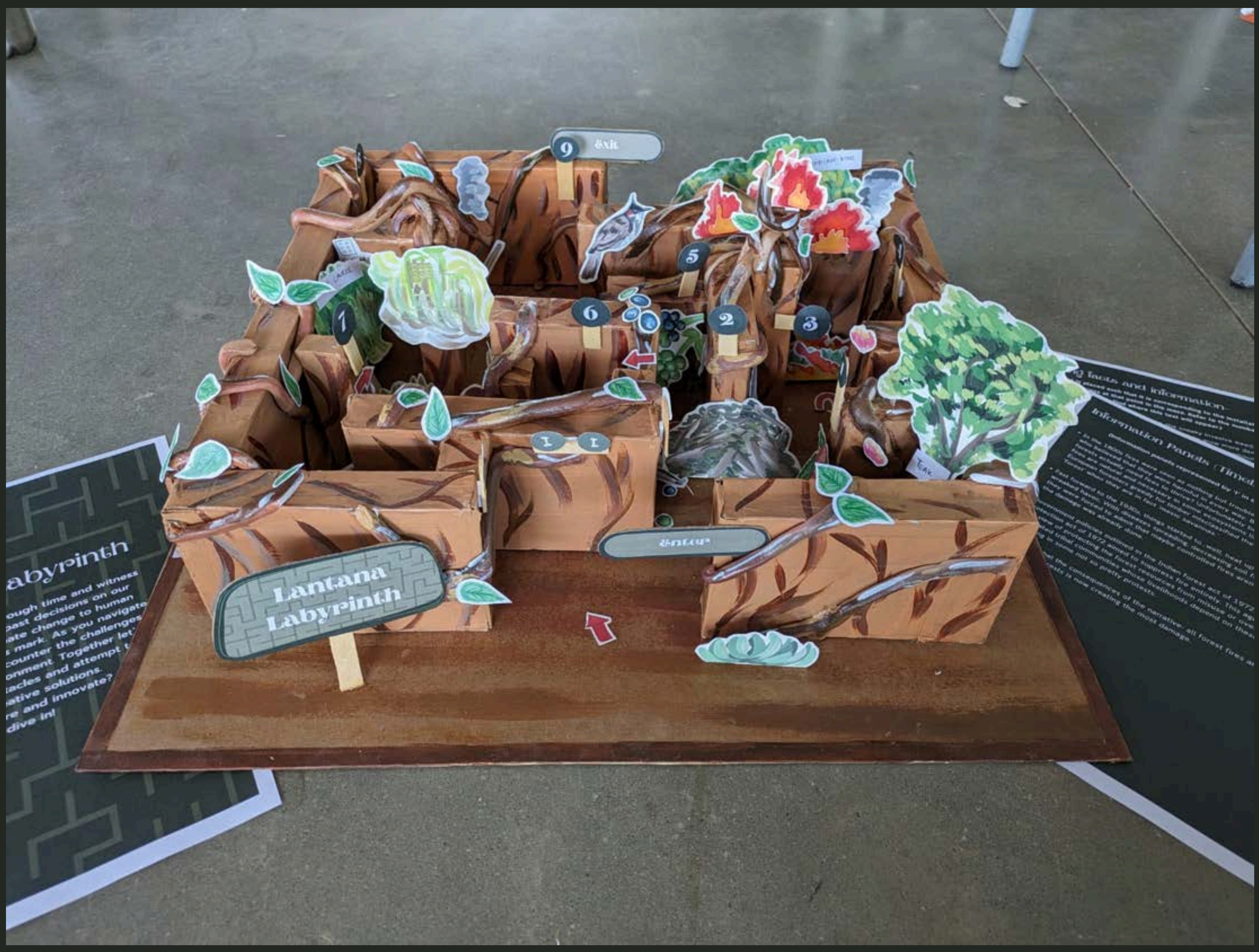
Lantana Labyrinth

Interactive and experiential exhibit



The iteration I decided to proceed with is iteration 3- Lantana Labyrinth. I've always felt that learning is best done when it is interactive and engaging and hence creating a maze seemed like the perfect way to give one a walk in today's nature while allowing them to discover and understand the problems that our ecosystems face.

Artistic vision-

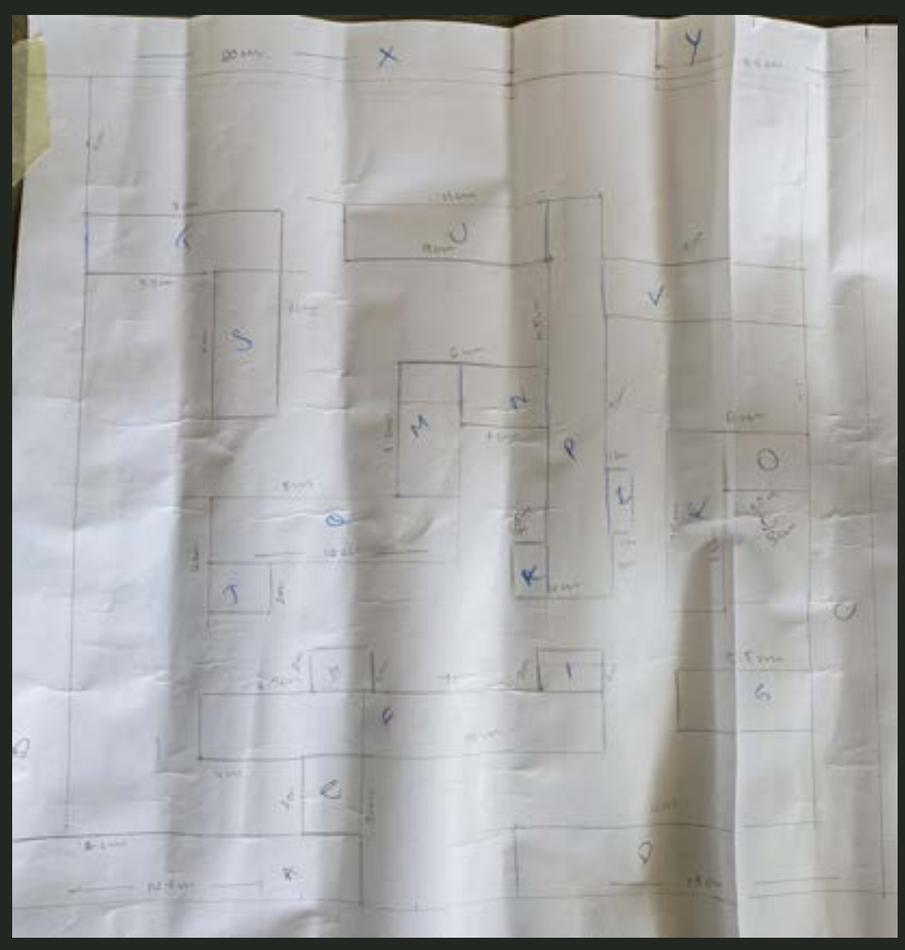
The lantana labyrinth is to immerse its visitors in the reality of today's forests and grasslands, particularly in southern India overrun by the invasive lantana camara. By constructing the maze itself from this weed, I aim to immediately highlight the issue to our audience. The maze is not just a simple walk but rather an educational journey. It begins with a few panels providing context as to what has been done to our forest over history. Then it transitions to the present showcasing the challenges faced by today's ecosystems. To ensure accessibility, the maze uses muted colors and comprehensible art installation suitable for all ages. The text is to be clear and easy to read utilizing fonts such as ‘cloud’ or ‘arimo’.

The experience is heightened through speakers providing sounds of chirping birds and temperature adjustments mimicking forest environments. Audiences are to be fully immersed,almost as though they themselves are an animal navigating their way through the forest.

As visitors exit the exhibit aims to leave a lasting impression and induce audiences to not just sympathize but rather empathize with nature instead. It hopes to create lingering thoughts and images that will provoke individuals to ponder on these existing issues and spark innovation in their minds.

Process note-

I began by drawing a layout of the maze onto a sheet of paper in the size that was intended for making the prototype. I drew out the top view marking the exact dimensions for each wall of the maze. I then began drawing out the required shapes onto sheets of cardboard to create the cuboidal walls. I made a few of the walls shorter and taller than the median height(4 inches) to create an irregular topography.

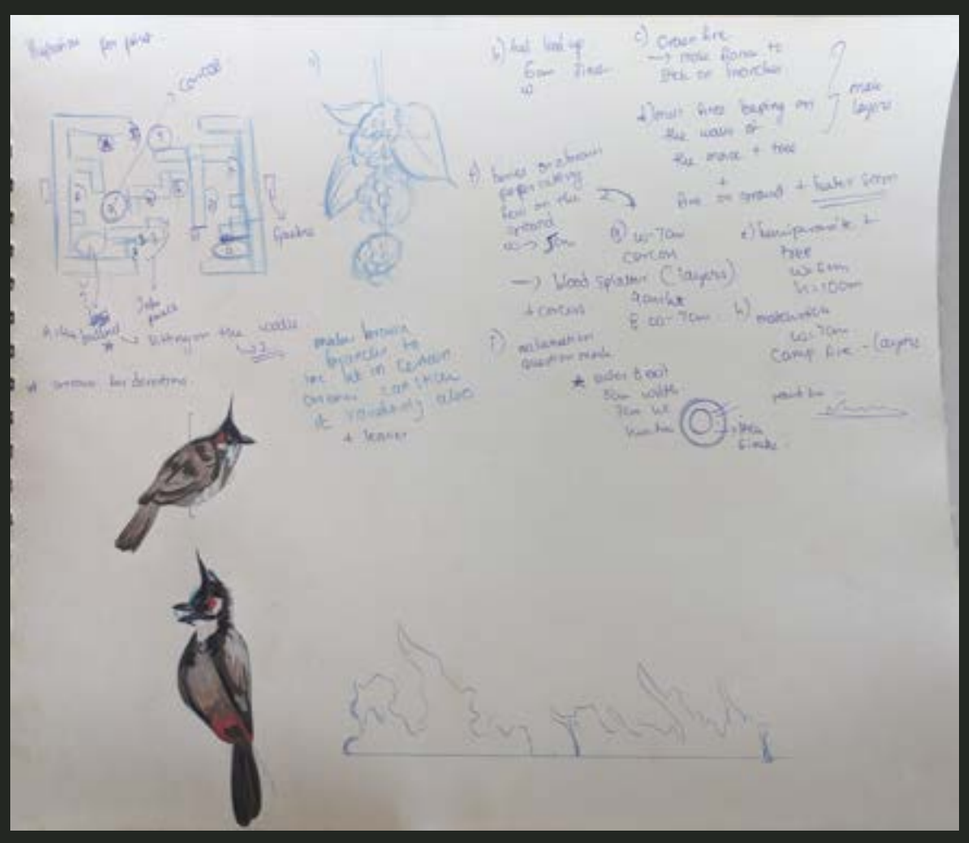


To create each wall I attached the parts using glue and made them sturdier with masking tape. I covered each wall with a layer of newspaper and glue to give it a smooth and glossy finish. This would help the clay that is to be stuck on top a little easier to attach. I painted each wall with two coats of light brown paint. I then painted branches onto each wall to represent lantana.
For the base I stuck two sheets of 900 gsm mill board together to create a more sturdy surface to attach my maze onto.

To create 3 dimensional lantana stems I used air dry clay and made varying sizes of cylindrical shapes. These are laid over the walls of the maze. There were a few difficulties that I faced while carrying out this process in terms of the branches of clay cracking and falling apart. I tried my best to mend the branches together as smoothly as possible.

As this was drying I mapped out on a piece of paper exactly where I wanted certain elements within the maze to be positioned. I then measured the dimensions of these areas in the model and noted them down. These dimensions would guide me in understanding how big or small the different illustrations are supposed to be. For example in the first installation of lantana flowers I ensured to keep the illustration within 5 cm of width and 4 inches height.

Once this was done I began the actual drawing and painting process. I painted out various elements that represent the different art installations in the maze. To do so I used poster colors. I also used paper cutting methods here and there to add a 3 dimensional feel. To represent certain technological elements I painted them out and placed them at the points where they would be required. I placed arrows at different points in the maze for easier navigation by audiences.
I also created sign boards indicating the exit and entrance of the maze.



I numbered different portions of the maze and created a corresponding document through which one can refer as to where certain text and information is to be placed in the real life version.

Execution process and meta data-

If the lantana labyrinth were to be created in real life I would want the dimensions of the room to be 30 by 30 feet. The height of the walls of the maze would vary from 8 feet all the way to 16 feet.
I would want the maze to be made of lantana itself. The lantana stems would need to be extracted and processed immediately with great care.
Collaborations could be made with ‘The real elephant collective’ and ‘The Shola trust’ in the process of creating these lantana walls through the various necessary steps.

These are organisations based in the Nilgiri region of South India aiming to eradicate Lantana while studying the vegetation and wildlife in these regions.

Extraction, boiling, peeling and smoothening of the stems would need to be done before bending and arranging them into the required shapes. These stems would then be placed onto a wire frame in the necessary dimensions by the mechanism of hammering.Through this collaboration the park would also have access to labor who will help from step one to its actual construction.

Transportation for material as well as labor would have to be arranged for as well. The other installation present in the maze would need to be transported from the place of being made to the national park.

Once the maze is constructed the entire structure would need to be coated using varnish. This would allow for the maze to last longer and remain in good and new condition.

The elements inside the maze can be made using natural materials such as clay and paper mache supported by wires. Wood from an invasive tree named senna can also be used to make various elements.

These elements can be created from artists around the country, talent can be found through design and art schools itself.
Health and safety must be assured to all the workers who take part in the creation of this exhibit. This would require collaboration with hospitals in Bandipur itself for easier accessibility in case of emergencies.
Speakers can be placed around the maze playing the sound of various birds such as tickell's blue flycatcher, coppersmith barbet, white bellied drongo and blue faced malkoha.

Heaters are to be placed in areas where there are installations depicting flame so as to create the feeling of heat emanating from fire. These technological elements will be placed strategically to ensure the visitors safety.
In terms of ensuring that the maze remains in brand new condition for as long as possible, it would be crucial to have certain rules informing audiences to not touch the installation present in the maze as well as to avoid carrying any edibles such as food and drinks inside.

Impact-

The maze caters to all age groups. Ensuring that all the visuals and installations are not too complex allows for easy comprehension of information without requiring any prior knowledge on the subject. I'd hope through this maze visitors become more educated and aware of the impacts human decisions have made on forests over history. It is to help one realize how far man's mistake can affect an entire ecosystem. The visitors are to imagine themselves to be an animal navigating their way through present day ecosystems. By doing so visitors are put into the shoes of an animal facing the obstacles wildlife does on a daily basis, particularly in Bandipur. Through sound effects and temperature adjustments I intend for the audience to be fully immersed. Viewers that interact with the maze would hopefully leave enlightened and empowered, becoming more aware of their surroundings. The maze is to spark ideas as well as curiosity among its participants. At its core the lantana labyrinth is a call to action. It challenges visitors to confront pressing issues of forest mismanagement and the spread of an invasive species. Through interaction and exploration the maze aims to inspire its visitors to delve deeper into these fields and contribute to meaningful change.

Final outcome (images of the model)-

Lantana Labyrinth

Embark on a journey through time and witness the consequences of past decisions on our ecosystems. From climate change to human activity, each has left its mark. As you navigate through this maze, encounter the challenges confronting our ecosystems. Together lets unravel various obstacles and attempt to brainstorm creative solutions.
Ready to explore and innovate?
Let's dive in!

Information Panels (Timeline)-

(Information panels represented by 'I' in the model/prototype.)

- In the 1800s fires were seen as nothing but trouble by the imperial forest service, who believed that they were harmful in every way. But did you know that some forests actually need fires to thrive? Unfortunately back then they didn't realize fires are natural and necessary in some ecosystems like the one in Bandipur. European foresters greedy for timber misclassified the vegetation in Bandipur as 'forest' when they are in fact 'mesic savannas.'

- Fast forward to the 1930s, things started to...well, heat up as uncontrolled fires wreaked havoc. With diseases spreading, decreasing soil fertility, weeds and pests they were forced to admit that maybe controlled fires aren't too bad. But by then, the damage was already done.

- Government policies outlined in the Indian forest act of 1972 and the wildlife protection act of 1972 aimed to suppress fire entirely. This again was done with the view of protecting the forest resources from misuse or over extractions. This frustrated tribal communities whose livelihoods depend on these resources resulting in some not so pretty protests.

- It's ironic that the consequences of the narrative- all forest fires are bad and destroying forests is now creating the most damage.

Interesting facts and information-

(The information is placed such that it is corresponding to the installation the audience will come across at that point in the maze. Refer to the numbers in the prototype to find where this text will appear.)

1. Enter the villain of our story- Lantana camara, the sneaky invasive weed taking over 40% of southern India's forests. This weed tends to grow more densely and rapidly in response to being burnt as well as produces enormous amounts of biomass that further fuel fires.
2. Fuel load ups or biomass consist of dead leaves, twigs and other organic material in the forest. As this biomass accumulates it creates high amounts of easily flammable substances which can turn a low intensity fire into a destructive wildfire.
3. Lantana can grow up to 20 meters high, that's as high as the canopy. Fascinating as it may be, if a fire was lit these tall branches of lantana would rapidly spread the fire to the canopy resulting in a crown fire. Crown fires are the ultimate showdown in the forest where the danger and destruction is the most intense.
4. While ground fires like the name stay on the ground, crown fires move towards the crown or the top of the trees leaping from one tree top to another.
5. The leaves of lantana are dangerous! I wouldn't suggest eating its berries either, in fact they are the most toxic. Consumption of these leaves by herbivores can poison them resulting in death.
6. The toxic berries though small are real trouble-makers. Aside from being poisonous, they consist of the seed. These berries get stuck in the fur coats of animals and are dropped off in other places around the forest or grassland. Little songbirds named bulbul are the prime seed dispersers of lantana.
7. Ever heard of hemiparasites? They are parasitic plants that get their nutrition by feeding off of other grown adult trees. Prescribed burns helped keep control of these parasitic plants by killing them off.
8. But guess what? We humans arent off the hook either. A whopping 95% of forest fires are in fact our fault. The most common causes are situations of human carelessness and negligence. Whether it's a campfire left unattended or a discarded cigarette butt, under favorable conditions these can form destructive fires.
9. Within the delicate balance of nature we confront a dual reality- fires, both beneficial and destructive and the spread of invasive species like lantana. How can we protect our ecosystem with such contrasting forces? In the spirit of innovation, we invite you to ponder. What do you think we could do to eradicate these problems at hand? Let your imagination roam freely, for it is through daring ideas that we can pave the way for a brighter future to cherish and protect.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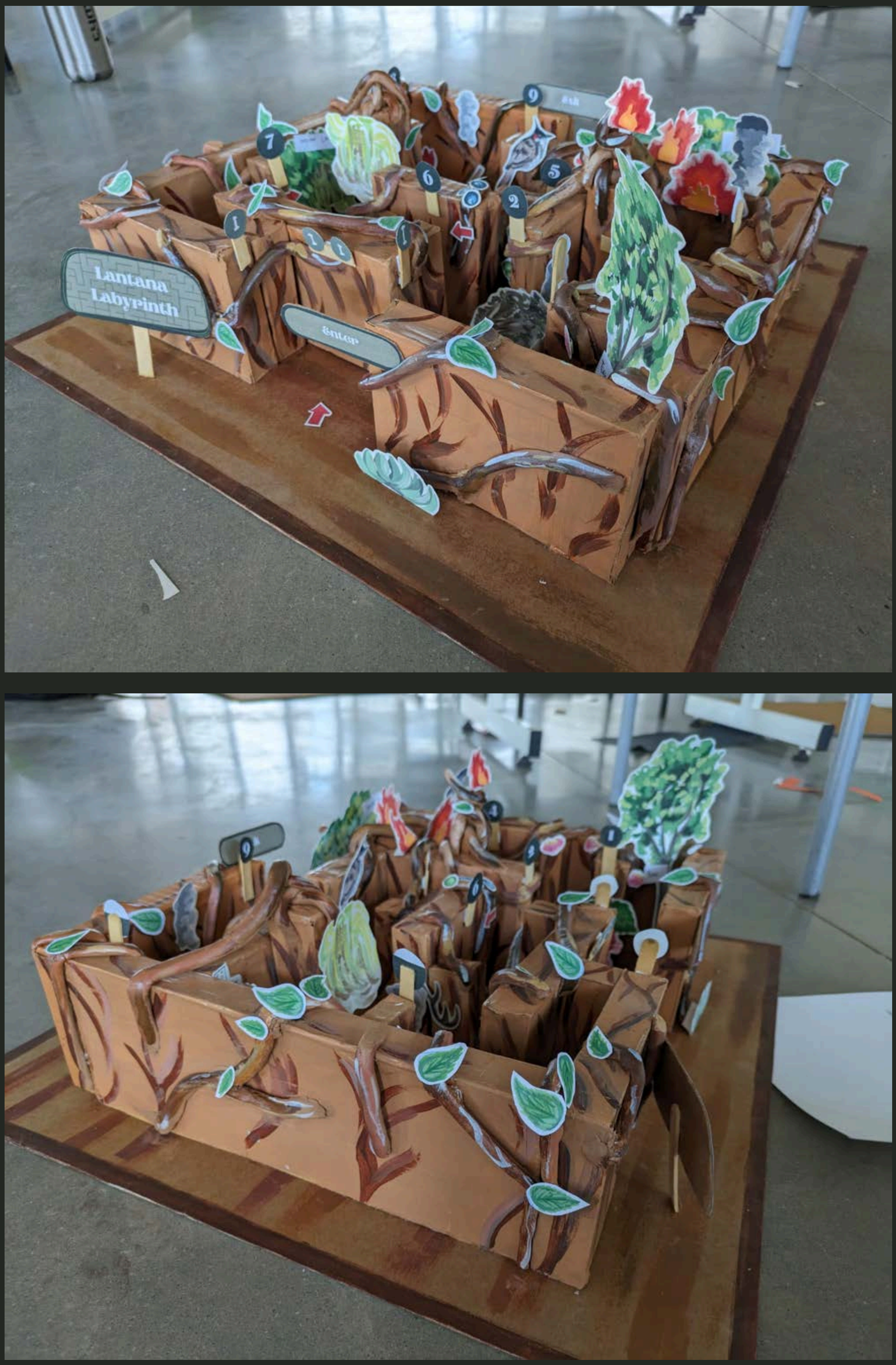
Lantana
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Enter