

The Maze challenge

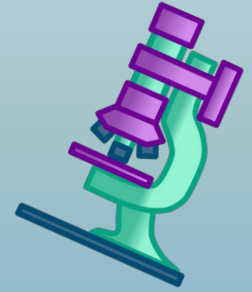


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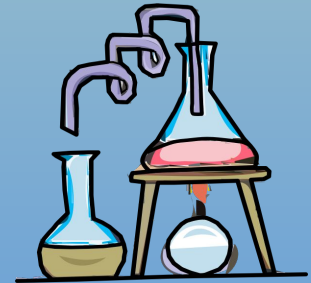
What is my question and project?

I am establishing a maze, where my hamster (Ginger) can go through. I will let her learn how to get to the exit, and I will let her do the maze for a while. Then I will put some treats in a different direction. The treats will lead to an dead end. Will she follow the treats or go the learn'd path to the exit? Will her decision depend on what type of treat we are giving her?



Hypothesis

My hypothesis is that, Ginger will not go to the end of the maze. She will probably follow the treats to a dead end. I consider this, because Ginger loves treats.



Experiment Design

These are the things that I used, put together, and how I will make the experiment work.

MATERIALS: magna tiles and treats.

SETUP: I put some magna tiles together to form a maze. Then after a little while, I will put some treats in a different direction. I will also put a treat at the end of the maze.

PROCEDURE: you will find out in the video's.

First time for everything

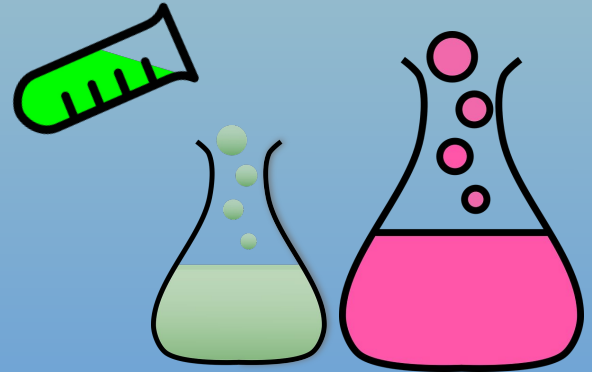


Let's do it again!



Time to Restart

As you can see Ginger went through the maze very good. A little too good. However I want Ginger to have a harder time with the maze, so I'm going to make it a little harder for her. I'm going to change the layout of the maze. Another thing I'm also going to try this time, is I'm going to time her. I'm going to see how much time she needs to go through the maze. I also want to see if putting some treats in a different direction is going to slow her down.



Experiment Design

Experiment design take two

MATERIALS: foam board, magna tiles, and treats.

SETUP: I will build the maze with the magna tiles on a foam board this time. I will still put treats in a different direction, and I will still put a treat at the end of the maze.

PROCEDURE: you will still find out in the video's.

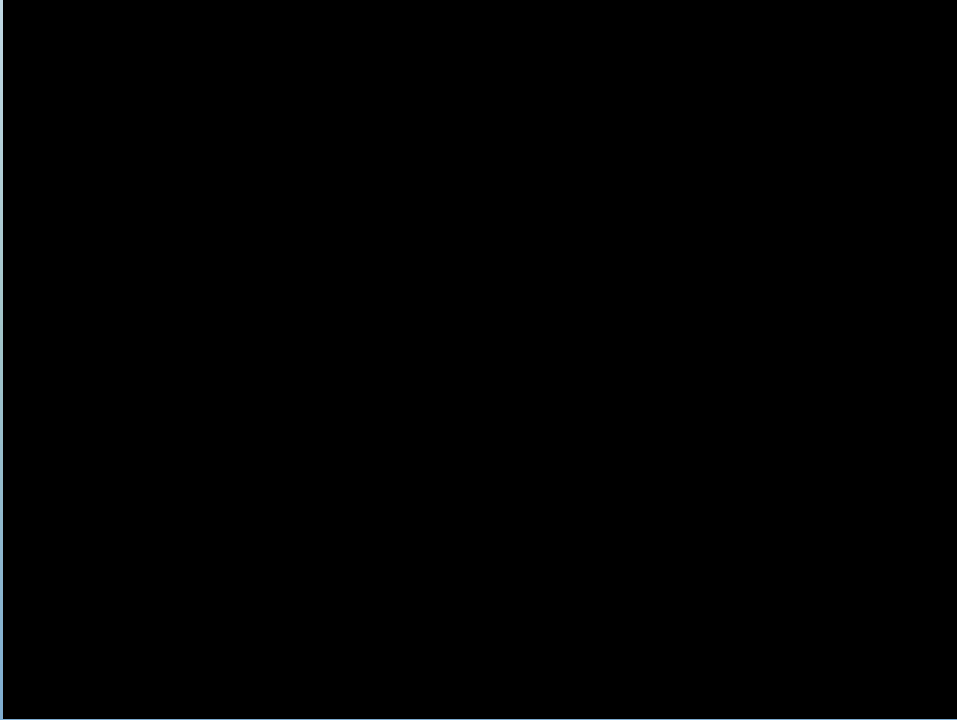


Another first try



The time she spent in the maze, was about 36 seconds. This does not include the time she was eating her treat.

Second try



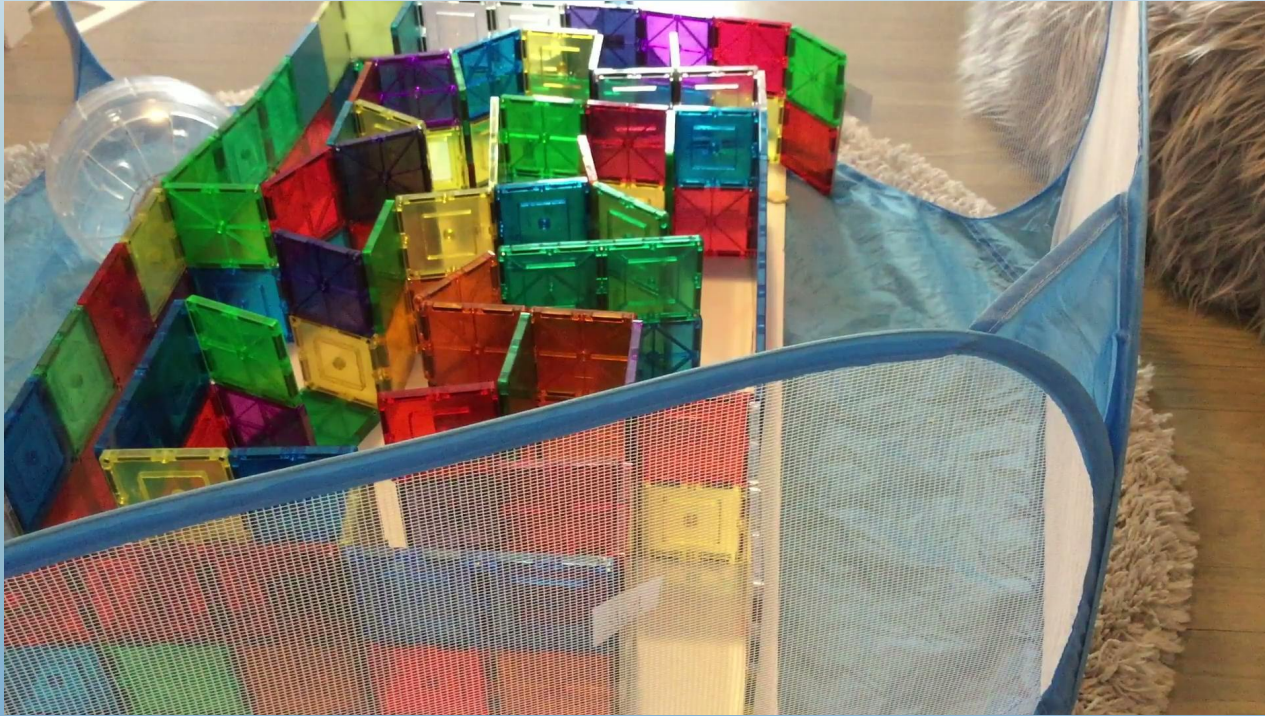
The time she spent in the maze, was about 1 minute and 42 seconds.

1, 2, 3!



The time she spent in the maze, was about 26 seconds. This does not include the time she was eating her treat.

$$2 + 2 = 4$$



Observation:
The first time she goes through the maze, is always better than the second time. In the second time, she always climbs walls. (Ginger goes through the maze, two times every day).

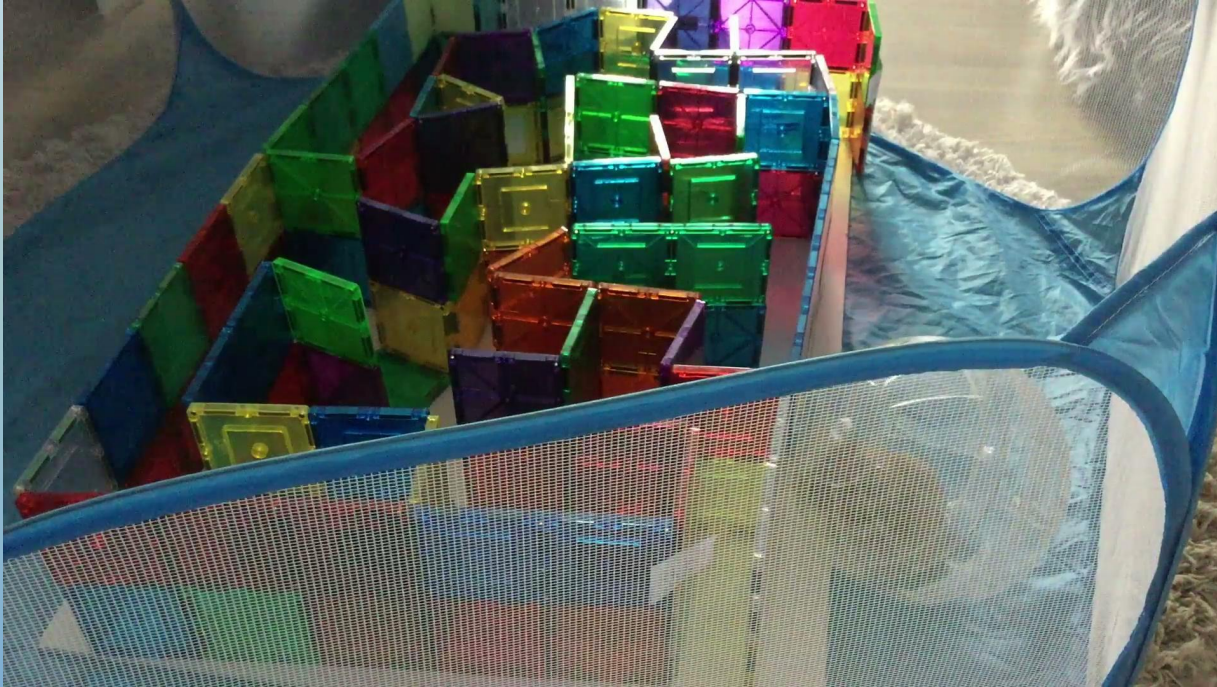
The time she spent in the maze, was about 43 seconds. This does not include the time she was eating her treat.

1, 2, 3, 4, 5!



The time she spent in the maze, was about 1 minute and 37 seconds.
This does not include the time she was eating her treat.

Take 6



This time Ginger spent about 24 seconds in the maze. This still does not include the time she was eating her treat.

7th time



Ginger spent in the maze about 1 minute and 58 seconds. This does not include the time she was eating.

4 + 4 = 8!



This time Ginger amazingly got through the maze in about 7 seconds!

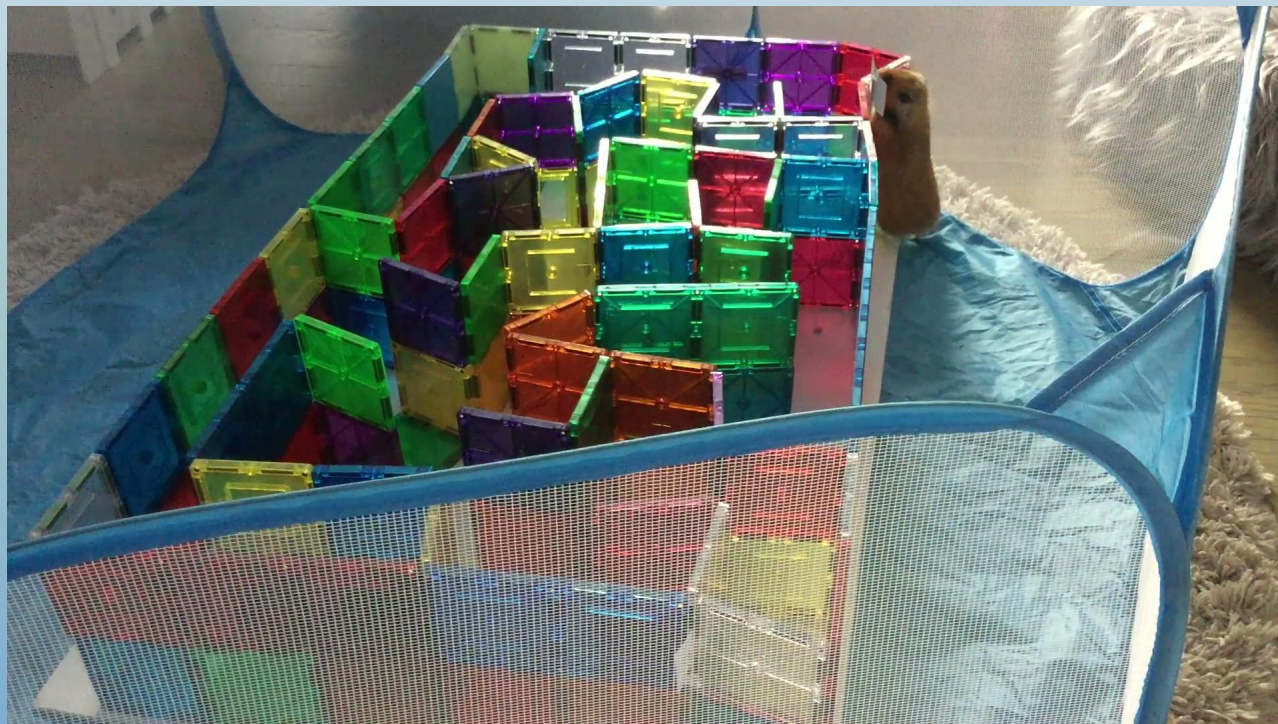
Try 9, this time with a challenge



Observation:
In the video you could see, that Ginger hesitate for a bit which way she was going to go.

Ginger spent 32 seconds in the maze.

Take 10



This time Ginger spent 17 seconds in the maze.

Try number 11



Observation:
Even if you
change the
treats, she will
still follow them.

Ginger spent about 20 seconds in the maze this time.

Take 12 is the last take



Observation:
Even with her
least favorite
treats, Ginger
still follows them.

For the last time, Ginger spent about 24 seconds in the maze.

Description of the whole experiment

It started out perfect, which was a problem. So I made a new maze, a much harder one. Ginger had some times where she went through it good, and some days where she took her time and strolled through the maze. I ended up having a bad but fixable problem. Ginger kept going on the walls, which made it easier for her to find the end. Though as you saw in the video's we fixed the problem. Then we started putting treats in a different direction. Though of course she followed the treats to a dead end. Who wouldn't? No matter what treats they were, she always followed them. Surprisingly, she also followed the treats one time even if they were her least favorite.

Conclusions

Was my hypothesis correct?

It turned out that my hypothesis was correct. Ginger followed the treats into a dead end. Even with some different treats, she still wanted to ignore the maze and go into the treat world. She probably did this, because when she saw the treats this feeling came up that made her want to follow them. You would probably do the same thing with candy.

What did I learn?

I learned that Ginger loves treats, and will follow the treats and ignore her knowledge about the end of the maze. I also learned that hamsters can learn how to go through mazes. I learned, that Ginger does better in her first try of the maze than in the second, most of the times (I always let her through the maze two times a day). I also think that Ginger loves pumpkin seeds! Forgot why, go back to slide 15. I also learned that Ginger hesitated sometimes about which direction she is going to go.