



CCG

BUG INVESTIGATION

CLASSROOM: TODDLERS

LENGTH OF INVESTIGATION: 6 MONTHS

The background is a solid green color with a subtle gradient. In the four corners, there are decorative white line-art patterns resembling circuit traces or a stylized tree structure. These patterns consist of thin lines that branch out and terminate in small circles.

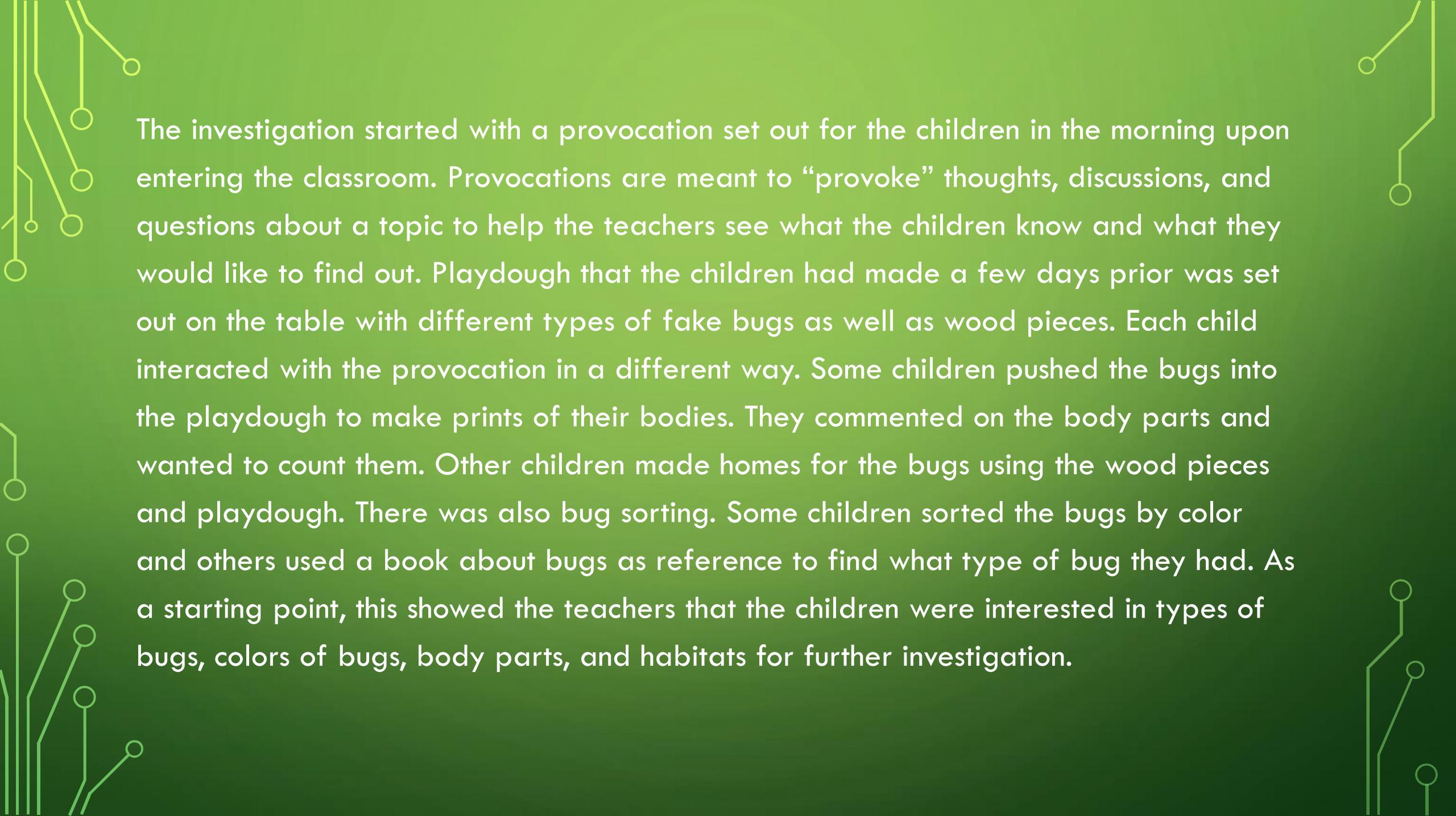
PHASE 1

BEGINNING THE PROJECT

The children in the Sprout room found a stinkbug in the classroom one day, leading to many questions about the insect.

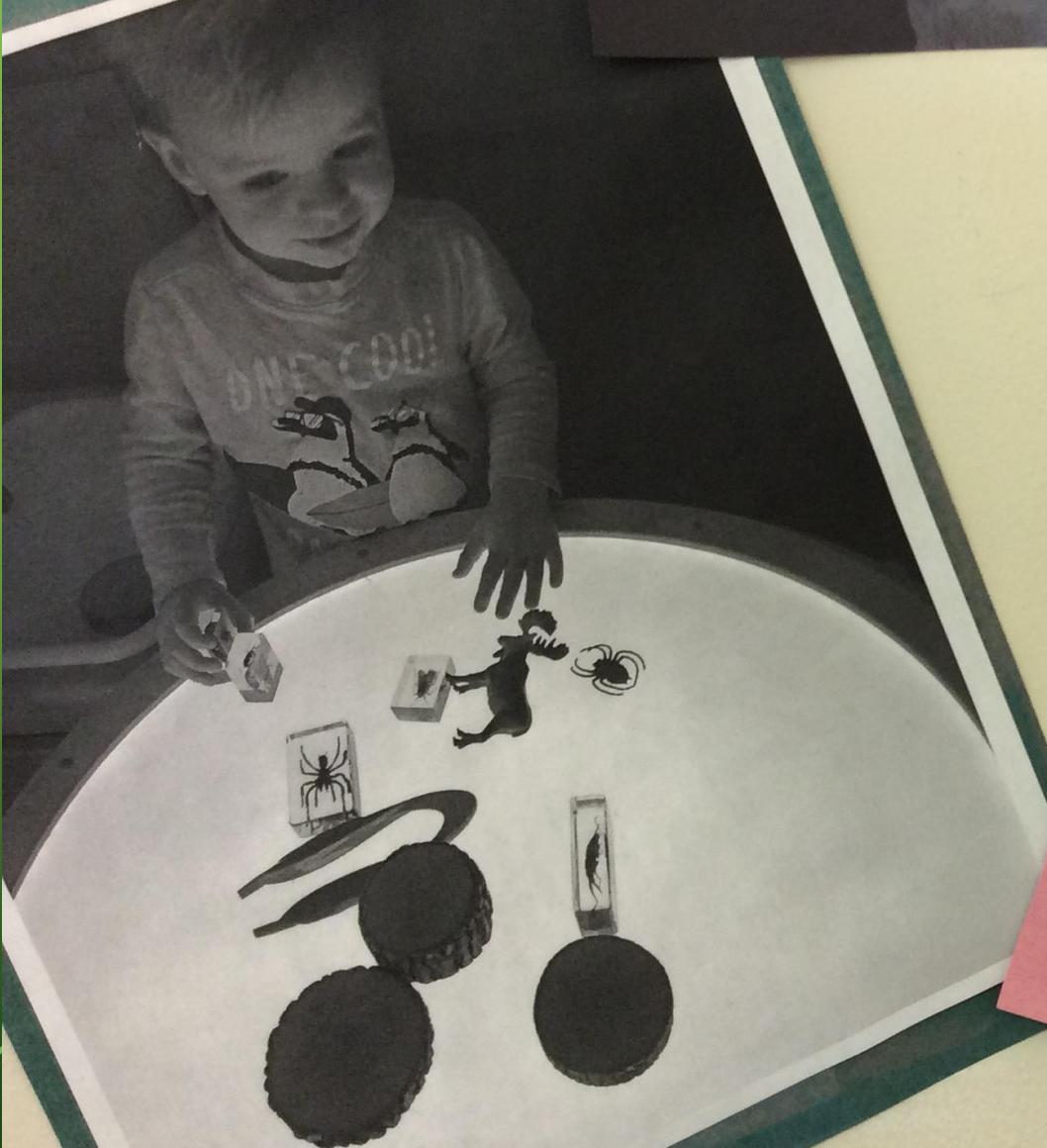
They all gathered around it and made observations on its color and the way it moved. They also pointed out wings. There were many conversations revolving around bugs for days after the encounter, so the teachers decided to investigate the topic further with the children.

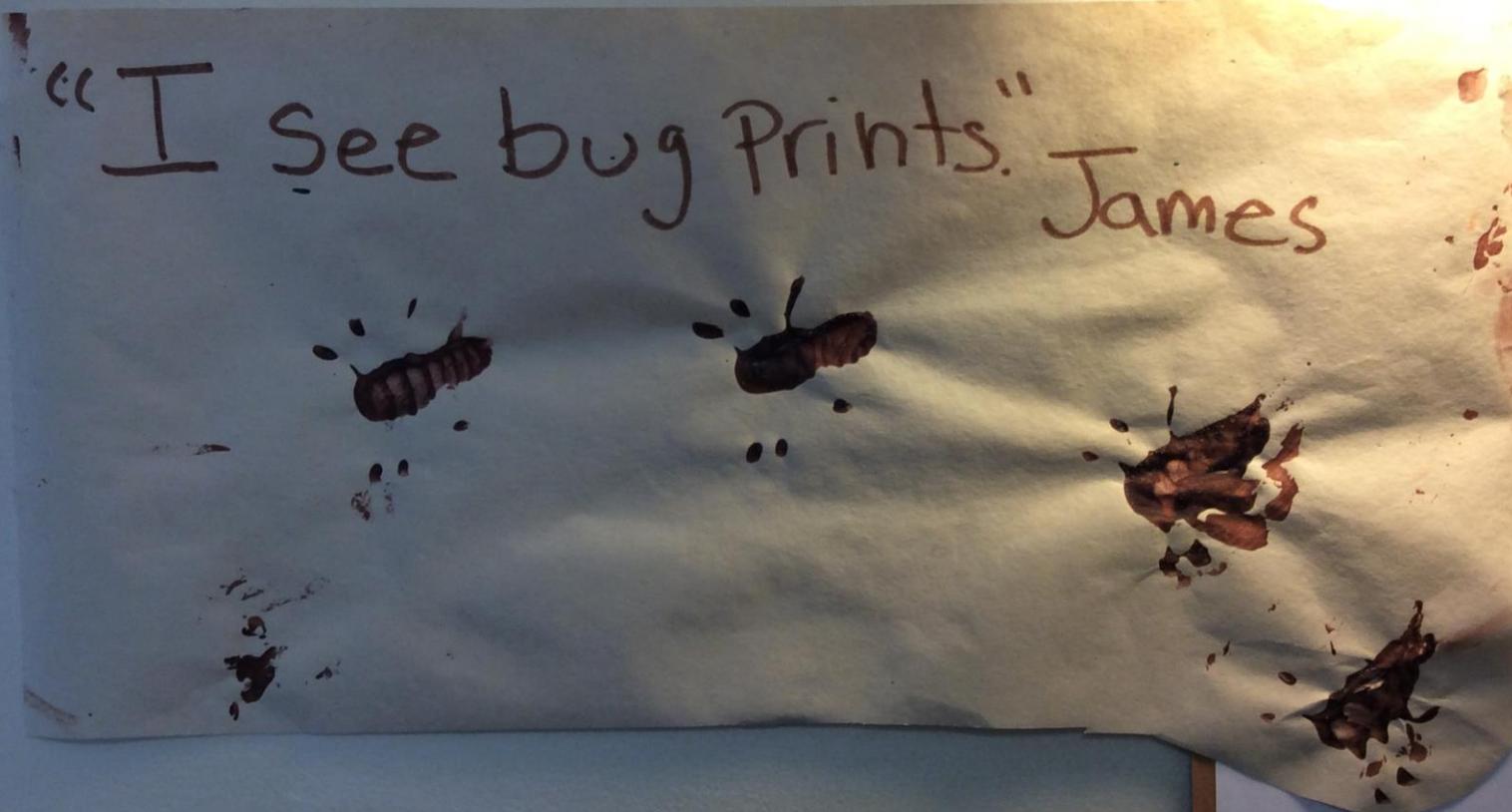


The page features a dark green background with decorative circuit-like lines in a lighter green shade. These lines are located in the top-left, top-right, bottom-left, and bottom-right corners, consisting of vertical and horizontal segments connected by small circles, resembling a stylized electronic board.

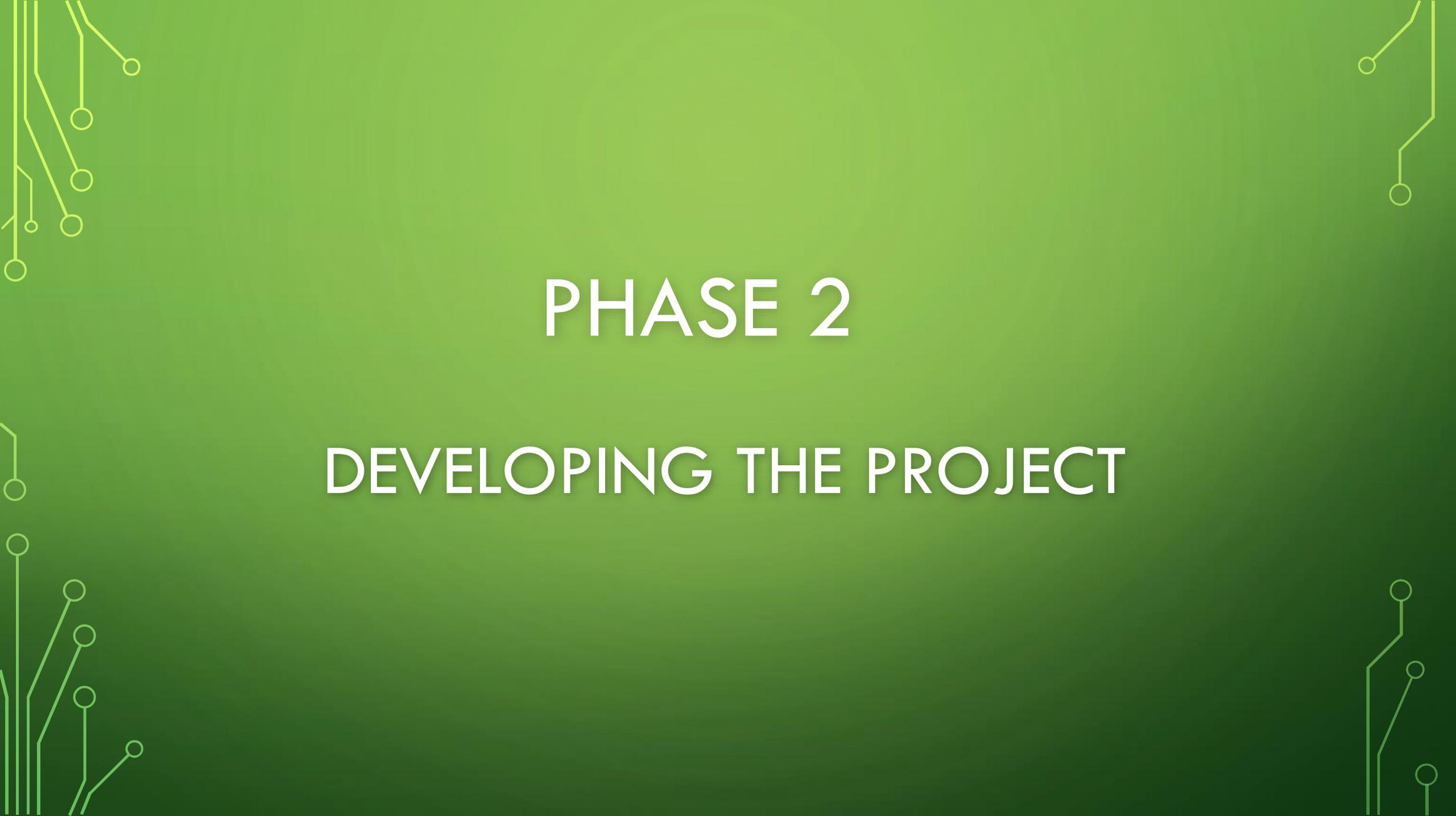
The investigation started with a provocation set out for the children in the morning upon entering the classroom. Provocations are meant to “provoke” thoughts, discussions, and questions about a topic to help the teachers see what the children know and what they would like to find out. Playdough that the children had made a few days prior was set out on the table with different types of fake bugs as well as wood pieces. Each child interacted with the provocation in a different way. Some children pushed the bugs into the playdough to make prints of their bodies. They commented on the body parts and wanted to count them. Other children made homes for the bugs using the wood pieces and playdough. There was also bug sorting. Some children sorted the bugs by color and others used a book about bugs as reference to find what type of bug they had. As a starting point, this showed the teachers that the children were interested in types of bugs, colors of bugs, body parts, and habitats for further investigation.

Evan, Reade and Emerson were seen helping one another sort the bugs out from the farm animals. They placed all the bugs in one bowl, while sorting out the non bugs in another bowl.





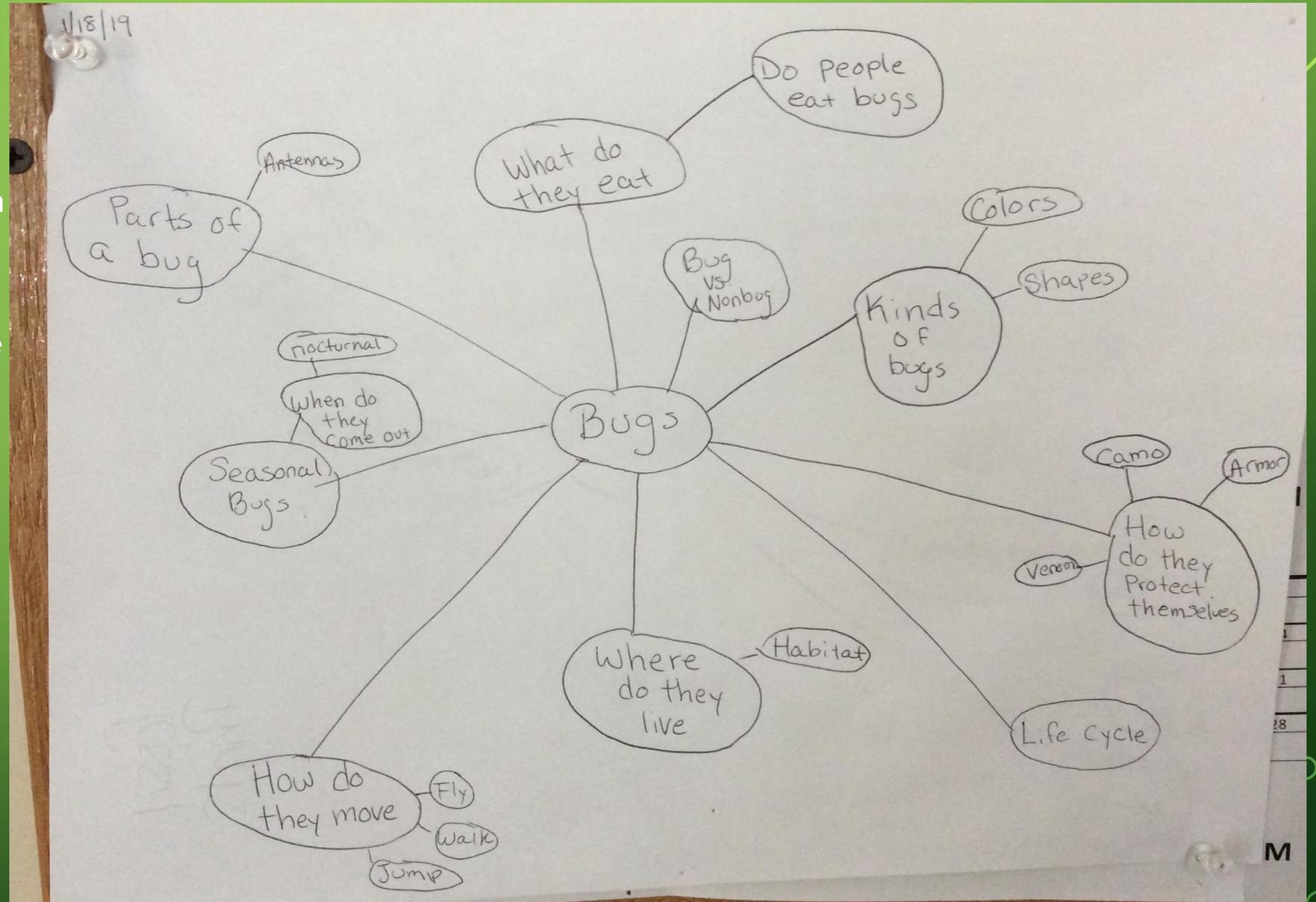
It all started with one
January morning a h
stink bug crawling on
by the way its legs st
watched the bug move its way fro
couch, and eventually making its

The background is a dark green gradient. In the corners, there are decorative white circuit-like patterns consisting of lines and small circles, resembling a PCB layout.

PHASE 2

DEVELOPING THE PROJECT

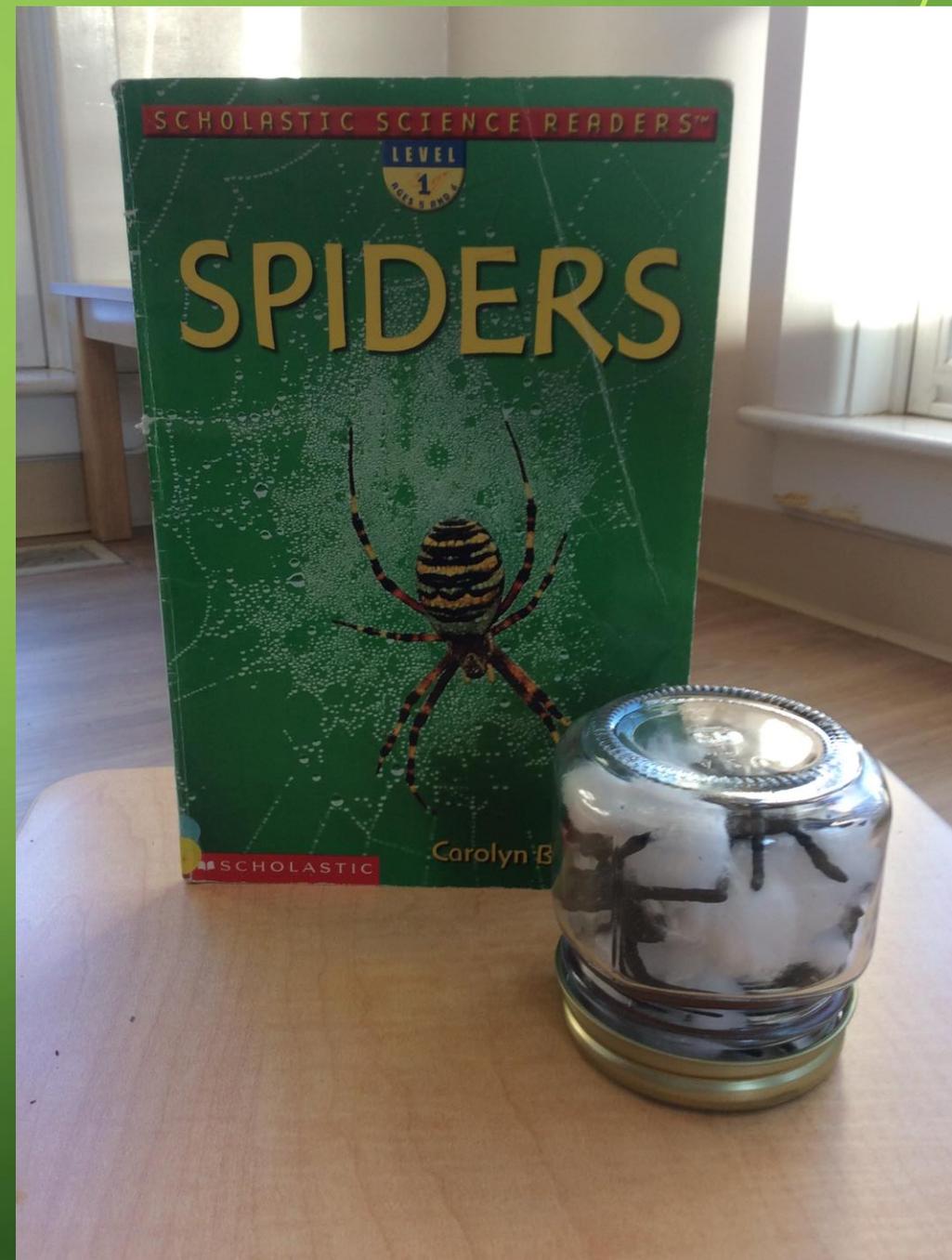
Hearing the initial reactions, conversations, questions and ideas from the children helped the teachers to form a curriculum web about the different directions the bug exploration could take them. Various activities were set up throughout the following weeks to allow the children to explore new information about bugs.



The first bug that was introduced was the bee. Some activities included making honey playdough and getting a chance to taste test honey. Pollination was explored on a basic level and the children used turkey basters and yellow water colors to “pollinate” flowers in the sensory table.



The children showed a strong interest in the book The Very Busy Spider by Eric Carle, so pretend spiders and cotton balls were placed in a jar for the children to observe. This sparked a dramatic play scenario among the children who pretended to be spiders crawling around the classroom spinning webs with their arms. The children asked questions such as, “Do spiders talk?” , “Why do spiders make webs?” and “How do spiders get out of their webs?” and made comments such as “Spiders don’t make honey, bees do.” This showed that the children were still interested in the topic, retaining information, and making connections.



Children were given more opportunities to explore webs by using geoboards to make their own webs. Additionally, teachers set up a spider web made out of string in the sensory table as well as on the underside of a table allowing children to weave spiders in and out of the web. The overhead projector was used to simulate a giant spider web on the wall and children were fascinated by the projection, running their spiders up and down the wall and placing the spiders on the projector to see how that would change the image.





Teachers set up an activity to answer the question on why spiders don't stick to their own webs. The children first spread colored tape out on a table and then dunked a pretend spider in oil. It was observed that the spider did not stick to the tape anymore. This led to a discussion on how spiders have oil on their legs, which prevents them from sticking to their own web.



While spiders were the main focus, children and teachers were simultaneously talking about other bugs and exploring their movements and habitats. Children were often seen hopping or crawling around the room at various points of the day exclaiming “I’m a grasshopper” or “I’m a ladybug!” The children were starting to identify bugs that were at first unfamiliar like praying mantises and beetles. They also started comparing and contrasting bugs and their properties. For example, starting to recognize which bugs can and cannot fly due to wings. Children used loose parts to create their own bugs and habitats, tried to draw their own bugs, and even wanted to trace some of the pretend bugs.



Ants became a big focus for the children when they found a group of ants surrounding a piece of food on the ground. The children observed the ants for quite some time. The next day, children pretended to be ants, carrying food on their backs, and also hiding food for their pretend ants to find. Teachers took notice and shifted focus from spiders to ants. The teachers ordered an ant farm and began to introduce digging and tunnels to the children. Here, they used paint to recreate a picture of ants digging tunnels.



When the ant farm arrived, teachers first asked the children what they thought would go inside it and answers ranged from spiders to bears. After exploring ants for a few more days, the children came to the conclusion that ants would go inside. Once they made the connection, they got to witness the ants being added and had many opportunities throughout the day to revisit the ant farm to observe. Some of the observations included:

“They’re so tiny!”

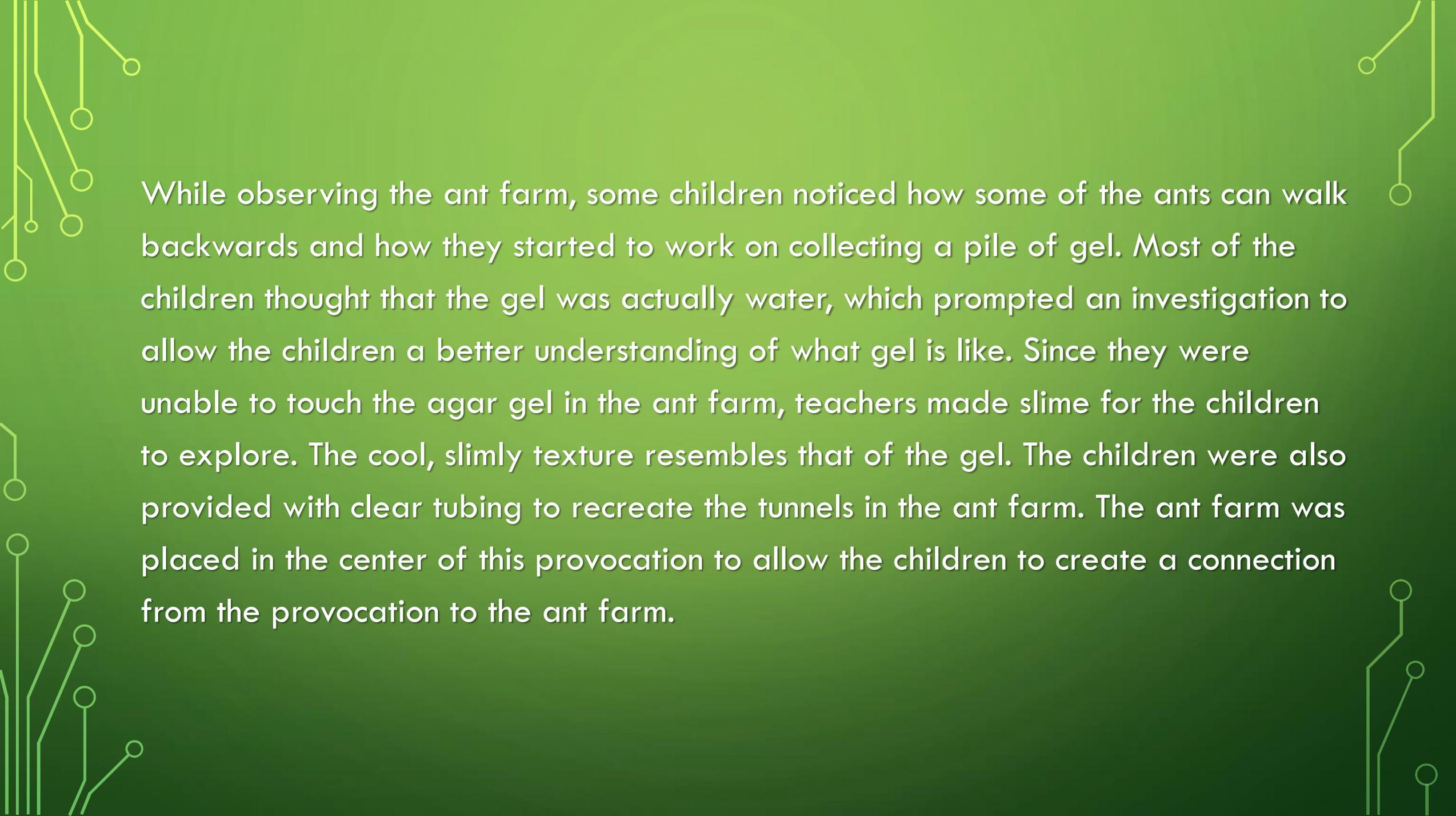
“It’s snowing in there”

“They’re crawling”

“That’s their food. It’s cereal.”

“They’re making tunnels”



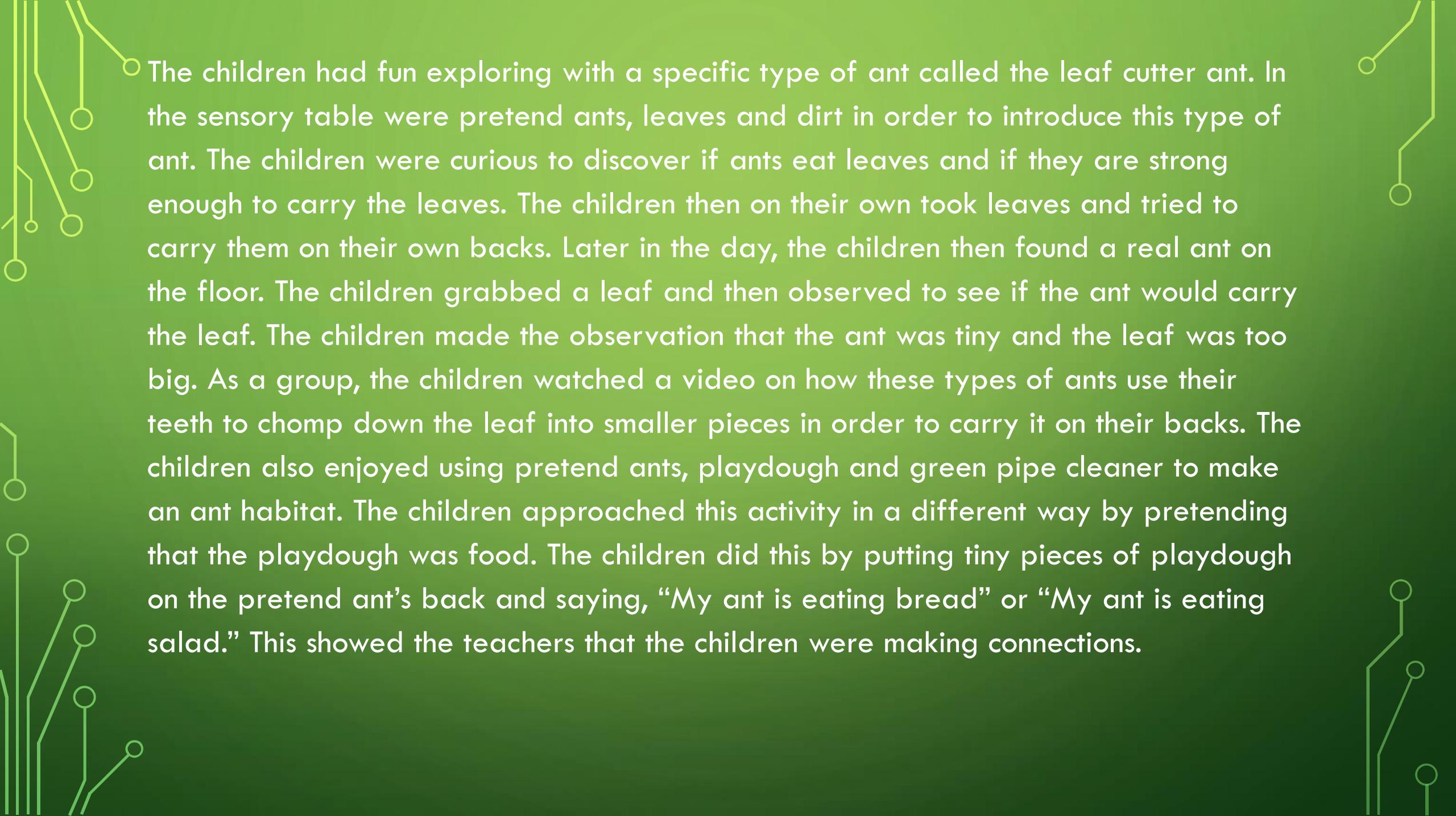
The page features a dark green background with decorative circuit-like lines in a lighter green shade. These lines are located in the four corners, consisting of vertical and horizontal segments connected by small circles, resembling a stylized electronic board.

While observing the ant farm, some children noticed how some of the ants can walk backwards and how they started to work on collecting a pile of gel. Most of the children thought that the gel was actually water, which prompted an investigation to allow the children a better understanding of what gel is like. Since they were unable to touch the agar gel in the ant farm, teachers made slime for the children to explore. The cool, slimy texture resembles that of the gel. The children were also provided with clear tubing to recreate the tunnels in the ant farm. The ant farm was placed in the center of this provocation to allow the children to create a connection from the provocation to the ant farm.

The children explored with some dirt inside a wooden maze to investigate bugs living in soil as well as exploring with a tunnel tray filled with soil, rocks, different size insects, ants and hand made tunnels. Some children hid the ants while other's used them to transport food to one another through the tunnels as they had seen in their live ant farm. While noticing that pictures of ant tunnels in a book called "The Ant's Nest" resembled gears, children were given the opportunity to paint their own tunnels with small plastic gears attached to paintbrushes.

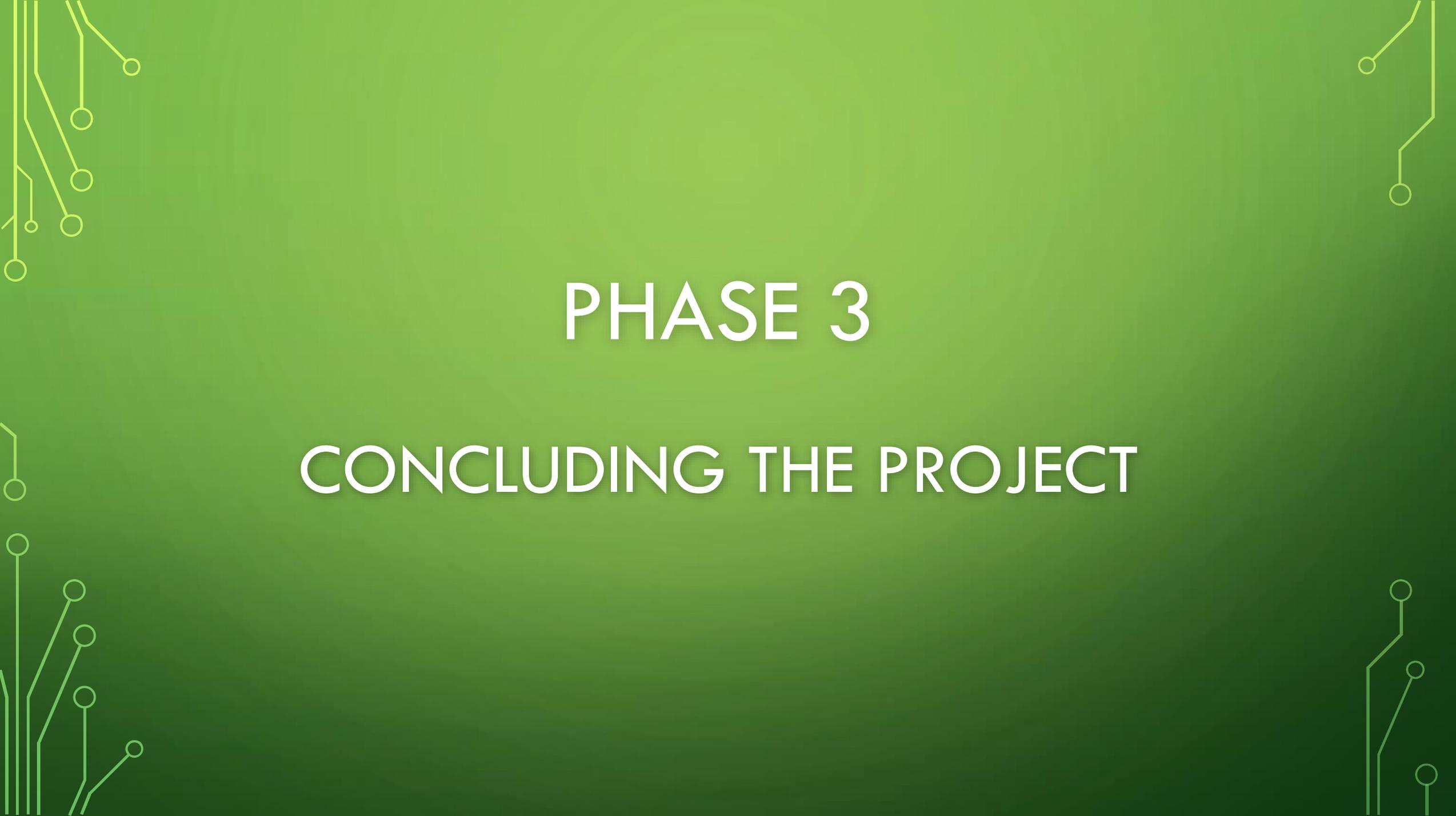






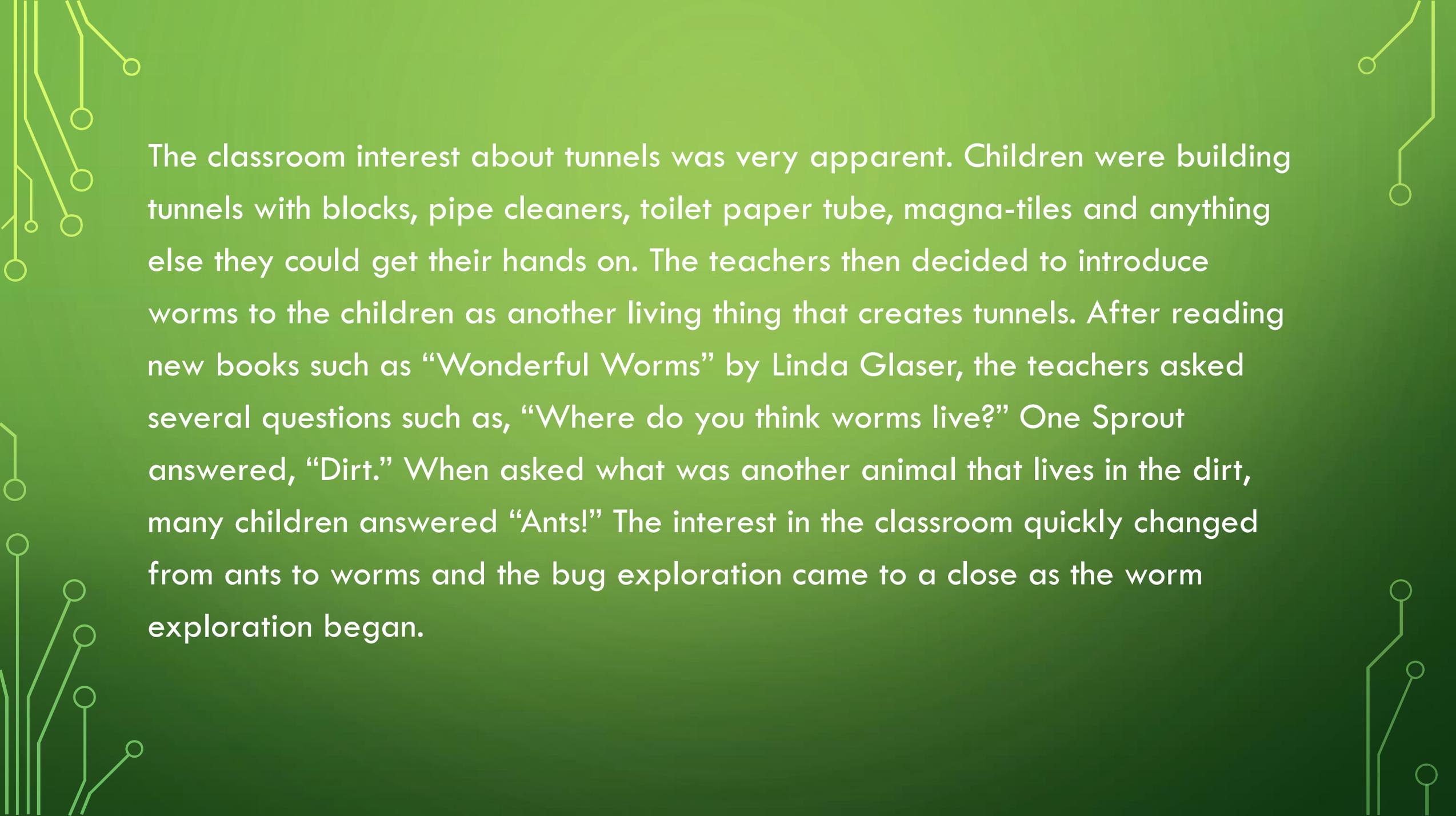
The children had fun exploring with a specific type of ant called the leaf cutter ant. In the sensory table were pretend ants, leaves and dirt in order to introduce this type of ant. The children were curious to discover if ants eat leaves and if they are strong enough to carry the leaves. The children then on their own took leaves and tried to carry them on their own backs. Later in the day, the children then found a real ant on the floor. The children grabbed a leaf and then observed to see if the ant would carry the leaf. The children made the observation that the ant was tiny and the leaf was too big. As a group, the children watched a video on how these types of ants use their teeth to chomp down the leaf into smaller pieces in order to carry it on their backs. The children also enjoyed using pretend ants, playdough and green pipe cleaner to make an ant habitat. The children approached this activity in a different way by pretending that the playdough was food. The children did this by putting tiny pieces of playdough on the pretend ant's back and saying, "My ant is eating bread" or "My ant is eating salad." This showed the teachers that the children were making connections.



The background is a dark green gradient. In the four corners, there are decorative white line-art patterns resembling circuit traces or a stylized tree structure. These patterns consist of vertical lines that branch out at various angles, ending in small circles.

PHASE 3

CONCLUDING THE PROJECT

The image features a dark green background with decorative circuit-like lines in a lighter green color. These lines are located in the top-left, top-right, bottom-left, and bottom-right corners, forming various geometric shapes and paths. The main text is centered on the page in a white, sans-serif font.

The classroom interest about tunnels was very apparent. Children were building tunnels with blocks, pipe cleaners, toilet paper tube, magna-tiles and anything else they could get their hands on. The teachers then decided to introduce worms to the children as another living thing that creates tunnels. After reading new books such as “Wonderful Worms” by Linda Glaser, the teachers asked several questions such as, “Where do you think worms live?” One Sprout answered, “Dirt.” When asked what was another animal that lives in the dirt, many children answered “Ants!” The interest in the classroom quickly changed from ants to worms and the bug exploration came to a close as the worm exploration began.