# Goldilocks and the Science Experiment

Psst! Goldilocks here. I’m the girl remembered for sneaking into the forest home of Mama, Papa and Baby Bear. I ate their porridge, sat in their chairs, broke the littlest chair, and took a nap in Baby Bear’s Bed.

But that’s not the important part of the story. I’m here to tell you what really happened that day. I’m not a sneak. I’m a scientist. What? You think a kid can’t be a scientist? Let me tell you what scientists do.

SCIENTISTS ASK QUESTIONS

I did venture into the Bear home that day. It’s not often I come across a cute little cottage in the woods. Right away I was curious.

Why was there unfinished food on the table? Why was one bowl of porridge still hot? Of course, I should have left, but…

SCIENTISTS DESCRIBE

I began to describe what I found. A red chair that was big and hard. A green chair that was small and wobbly. Porridge in three different bowls with honey. Yum!

I *know*, I should have gone home, but once a scientist describes… SCIENTISTS COMPARE AND CONTRAST

For example, all the beds had mattresses, but each bed was a different size. There were two fluffy pillows and one lumpy pillow.

All in all, this looked more comfortable than a den in the woods. I was right! I only took a short nap. Once I compared and contrasted some items, I wanted to sort them because….

SCIENTISTS CLASSIFY

Beds and chairs are examples of furniture. Bears and little girls are examples of mammals. There were a lot of toys I could’ve sorted, but that was a distraction. I needed to stick to the science process at hand. I’ve been known to get carried away classifying. You should see my rock collection! But I needed to put all this information together because…

SCIENTISTS OBSERVE

Using my five senses, I **saw** the uneaten bowls of food.

I **listened** to the quiet.

I **smelled** the morning fire. I **felt** the warm bowls.

I **tasted** the porridge. Well, truth be told, I ate **all** the porridge. Even the too hot bowl!

From my observations, I figured the bears still lived there. Combining my observations and what I already knew – that bears are picky about their stuff – led me to my next step…

SCIENTISTS PREDICT (aka HYPOTHESIZE)

I predicted the bears would be mad I was there. I should’ve fixed the chair and I *really* should have left, but …

SCIENTISTS EXPERIMENT

I decided to test my hypothesis. I experimented by staying to see if the bears got mad OR if they invited me to stay for breakfast.

Of course, I’d already eaten their breakfast, but I *had* to know the answer because…

SCIENTISTS CONCLUDE

My hypothesis was correct! The bears were mad. I never ran so fast! I concluded that bears really like their porridge.

And they don’t like little girls breaking chairs and napping in their beds. I wanted to tell everyone because…

SCIENTISTS COMMUNICATE

I told my parents how the bears chased me away.

Later, I shared my story at school so other kids didn’t go uninvited into a bear’s home.

I even gave a talk on bear behavior.

Now you know what a scientist does. Who else can be a scientist?

YOU!

There are many different kinds of scientists. They have special names based on what they study. Maybe one day you’ll be a scientist. Maybe you already are.

# BACK MATTER

These science process skills do not necessarily go in a strict order. You might observe something that makes you curious and have a question. You might have a question first. You might gather more data or observations and redo the classification you’d already done. Science doesn’t work in a specific order.

What is important is that once an experiment is done, its conclusions are shared so that more questions can be asked. Science is never ending. It’s cyclical.

Science is also a natural way that humans think. Three-year-olds are a wonderful example of budding scientists, yet they often feel intimidated later in life about the complexity of science. It is my hope that this book helps to reduce those fears as young readers see that they can indeed think like a scientist.

# Kinds of Scientists

Since the world is full of interesting questions and problems to solve, scientists focus on a topic that interests them. This is called their specialty. Below is a list of some kinds of scientists and what they study.

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| --- | --- |
| **Type of Scientist** | **What they study** |
| Agronomist | soil |
| Astronomer | space |
| Biologist | living things |
| Botanist | plants |
| Chemist | chemicals and how they work together |
| Developmental  psychologist | how humans and grow and learn |
| Entomologist | insects |
| Epidemiologist | diseases |
| Geologist | rocks and the earth |
| Geneticist | genes and heredity |
| Herpetologist | amphibians |
| Hydrologist | water |

|  |  |
| --- | --- |
| Ichthyologist | fish |
| Lepidopterist | butterflies |
| Marine biologist | ocean life |
| Meteorologist | weather |
| Molecular biologist | the structure and function of small molecules needed  for life |
| Neuroscientist | the nervous system |
| Oceanographer | the nonliving and living features of the ocean |
| Ornithologist | birds |
| Paleontologist | fossils |
| Seismologist | earthquakes |
| Virologists | viruses |
| Volcanologists | volcanoes |
| Zoologist | animals |

# Side Bars OR Back Matter

**Scientists ask questions:** For example, how long will it take for my biodegradable fork to decompose? Will homemade or store-bought bread mold faster?

**Scientists describe:** size, shape, color, texture, number of parts, function

**Scientists compare:** How are objects or organisms the same?

**Scientists contrast:** How are objects or organisms different?

**Scientists classify:** They place objects or organisms in groups based on how they are similar.

**Scientists observe:** They collect information using their five senses. **Scientists predict or hypothesize:** Predictions are made based on what they observe and what is already known.

**Scientists experiment:** They set up a fair test using variables to see if their hypothesis is correct.

**Scientists conclude:** They figure out the answer to their hypothesis based on the results of their experiment.

**Scientists communicate or share information:** They give talks, speak at conferences, write scientific papers, do radio interviews, appear on TV shows, and share their findings via the Internet and books.

# References

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