

CURIOSITY AT HOME

PATTERN HUNT



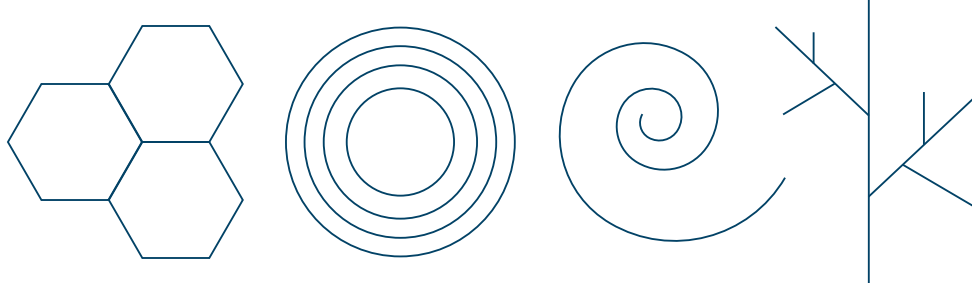
A pattern is a design that repeats. Mathematicians look for patterns in objects to learn more about that object. Artists, designers, and engineers use patterns within the things they create to make objects look more interesting, or to trick the eye. There are many different types of patterns that are naturally occurring, including those found on trees, snail shells, and in beehives.

MATERIALS

- Paper or science notebook
- Pencil

PROCEDURE

- Go on a nature pattern hunt either around your community or by looking out your window.
- While on your nature pattern hunt, look for these common patterns found in nature:



- Write down or draw in your science notebook the objects where you found these patterns.
- Can you find any other common patterns in nature besides these four? Write or draw those patterns in your science notebook.
- Print the table (on the following page) and glue it to a science notebook page, or copy it into your notebook to keep track of the patterns you find and where you found them!



Experiment continued on next page...



Show us how you're being curious! Share your results with us.

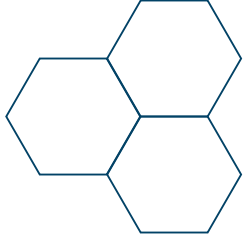
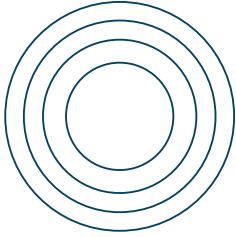
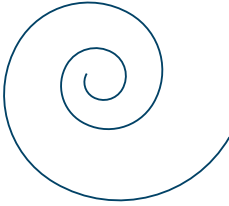
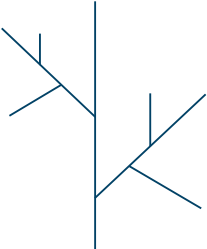
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Pattern	Location(s) Found
	
	
	
	



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K–2 GRADE EXPLORATION

Here are some questions you can explore together.

- Which pattern did you find the most?
- Did you find patterns in similar places or on similar objects? Why do you think that is?
- See if you can find a pattern you've never noticed before. What does it look like?
- Draw a new pattern of your own design. Have you ever noticed this or a similar pattern in nature? Where might you find that pattern in nature?

Resources to Explore More:

- Check out *Fractals for Fun* from the University of Kansas. Do you notice any familiar patterns? Any new patterns?
<https://educationonline.ku.edu/articles/teaching-kids-patterns-in-nature>



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3–5 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

- Why do you think certain patterns are so common in nature?
- Which natural patterns have you seen used in design and engineering? Why do you think these patterns are copied?
- Why might it be important or relevant for an engineer or mathematician to study these naturally occurring patterns?
- Draw a new pattern of your own design. Have you ever noticed this or a similar pattern in nature? Where might you find that pattern in nature?

Resources to Explore More:

- Why do some naturally occurring patterns look the way they do? Math Patterns in Nature from the Franklin Institute has some answers: <https://www.fi.edu/math-patterns-nature>
- If you would like to take a deep dive into naturally occurring patterns, check out A Lesson on the Fibonacci Sequence from Mensa Foundation to learn more about a very common pattern in nature: <https://www.mensaforkids.org/teach/lesson-plans/fabulous-fibonacci/>



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6–8 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

- What geometric shapes do you notice in nature?
- Why do you think certain patterns are so common in nature?
- Which natural patterns have you seen used in design and engineering? Why do you think that may be?
- Draw a new pattern of your own design. Have you ever noticed this or a similar pattern in nature? Where might you find that pattern in nature?

Resources to Explore More:

- If you would like to take a deep dive into naturally occurring patterns, check out *A Lesson on the Fibonacci Sequence* from Mensa Foundation to learn more about a very common pattern in nature:
<https://www.mensaforkids.org/teach/lesson-plans/fabulous-fibonacci/>
- Are there patterns in nature that haven't been discovered or fully understood? Discover this and over topics related to patterns in the Science Behind Nature's Patterns in Smithsonian Magazine:
<https://www.smithsonianmag.com/science-nature/science-behind-natures-patterns-180959033/>



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