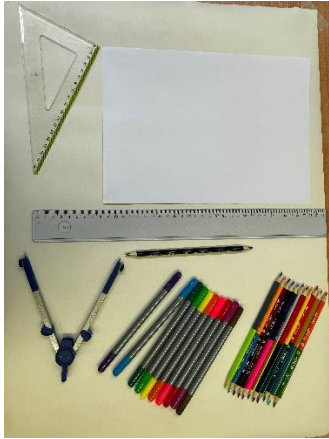
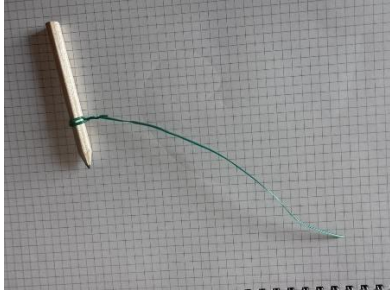


DRAW WITH FIBONACCI SEQUENCE

Name of the object and creator	Drawings with the help of the Fibonacci sequence				
Recommended ages	9-11				
Thematic areas combined (STEAM)	Sciences	Technology	Engineering	Arts	Mathematics
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Materials needed	<ul style="list-style-type: none"> • Paper (grid paper for easier drawing) • A pencil • a pair of compasses (or a pencil tied to the rope) • colored pencils (crayons or markers), or other drawing tools <div style="display: flex; align-items: center; margin-top: 10px;">  <div style="margin-left: 10px;">or instead of compasses</div> </div> <div style="display: flex; align-items: center; margin-top: 10px;">  </div>				

Outline of the steps	<ol style="list-style-type: none">1. Drawing a basic Fibonacci sequence2. Draw different items found in nature or around you3. Make a drawing on your own using the Fibonacci sequence4. Make a class exhibition of drawings
References	<p>https://tumamocsketchbook.com/2021/05/what-is-the-golden-spiral-to-understand-it-we-need-to-draw-it.html</p> <p>https://www.mathsisfun.com/numbers/fibonacci-sequence.html</p> <p>https://www.youtube.com/watch?v=7N7fx3ARAQQ</p>

STEP BY STEP: How to draw a Fibonacci spiral

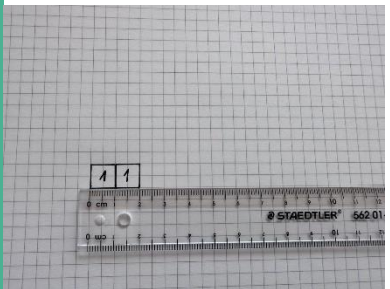
Step 1: Draw Fibonacci spiral

Estimated time: 20 min

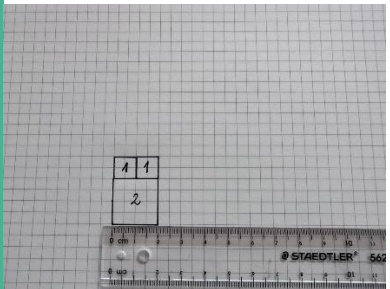
- Draw the Fibonacci spiral like shown at the pictures:



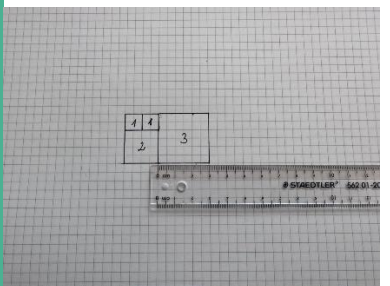
Make a square with ruler with sides 1 cm long.



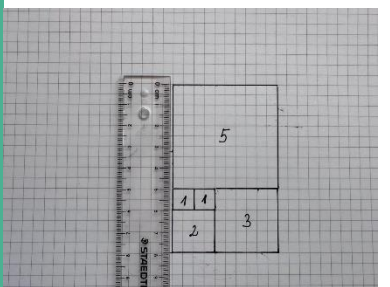
Make another one of the same size.



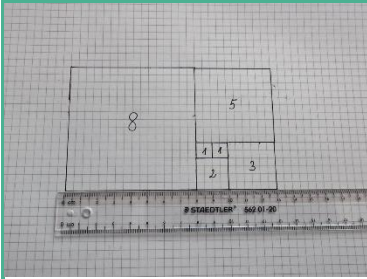
Under the squares make one square 2x2 cm.



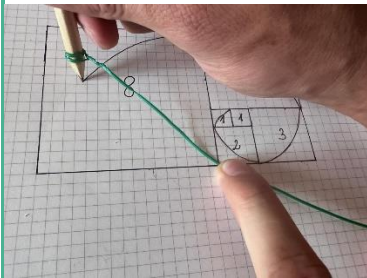
Then, draw a square 3x3 cm like shown in the picture.



The next square's dimension is 5x5 cm.



The last square in this example is 8x8.



Connect the curve with the help of a pair of compasses or a pencil tied with a string like in this picture.

Now you are ready to make your own drawing!

Step 2: Make a few drawings

Estimated time:30

Here are a few examples how the Fibonacci spiral can help you draw:



1 young fern



2 snail



3 cone

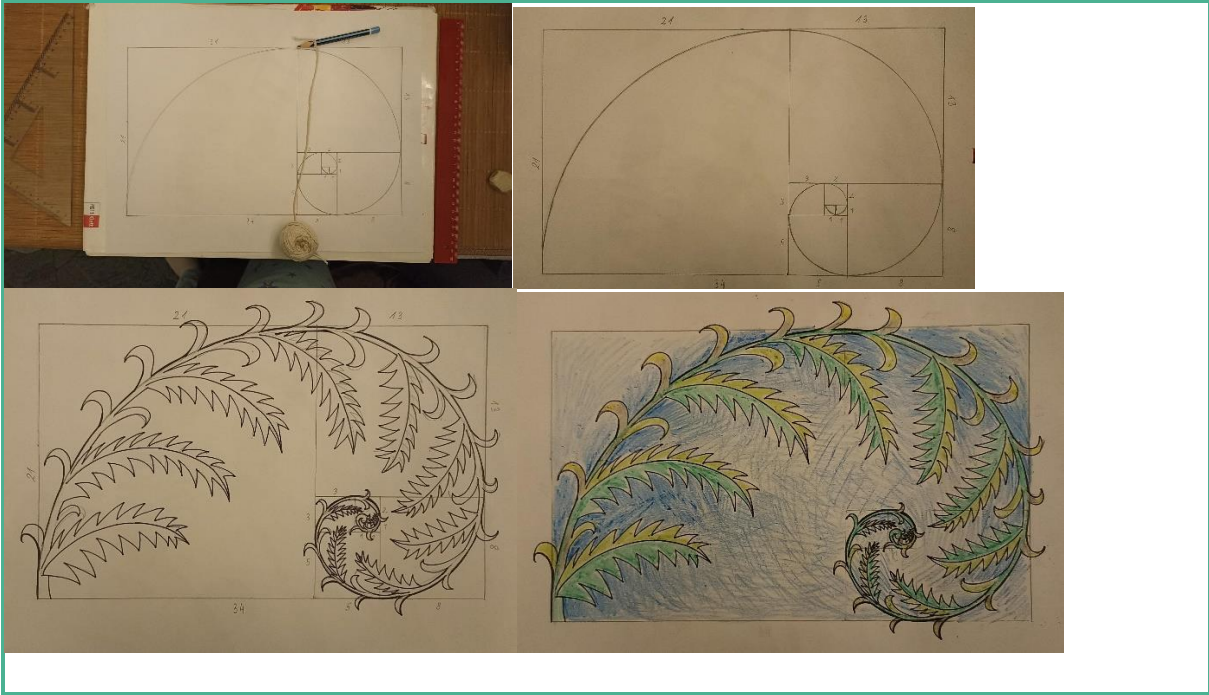
Step 3: Make a drawing

Estimated time:30 min

Now let's make a drawing of a young fern! You can find a young fern in the forest in early spring. Follow this pattern and use your own creativity.

You can use a piece of rope instead of a pair of compasses.

Arrange a class album of drawings and make a class exhibition.



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