

Let us make snowflakes – teacher guide

1. Draw by hand two snowflakes.

2. Think of various means and ways of representing the snowflakes.

Find on the internet different images of snowflakes.

3. “The more it changes, the samer it gets” is a possible translation of a famous French proverb. Try to find what the same is while looking at these different images of snowflakes.

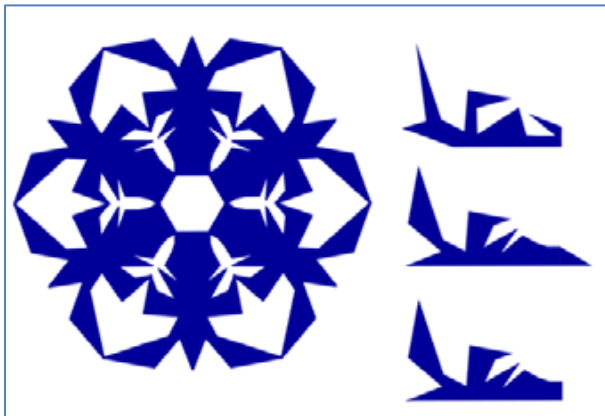
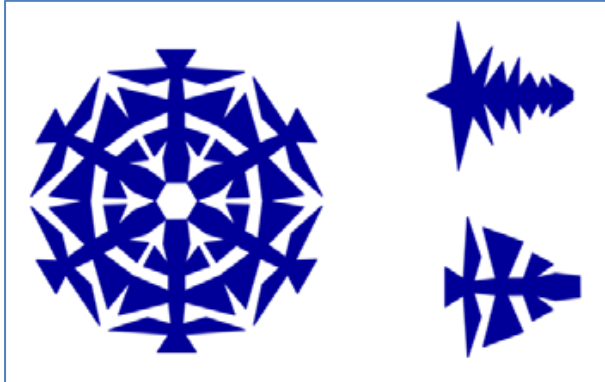
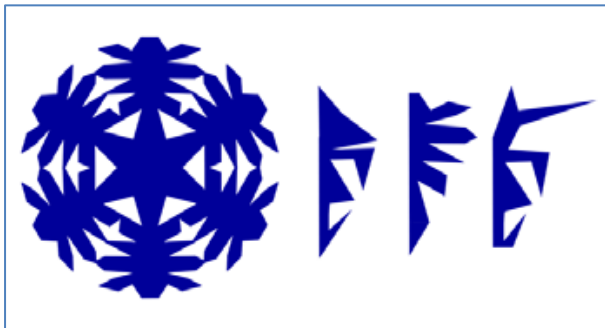
4. Write down properties relevant to the geometric representation of the snowflakes.



5. Create models of a snowflake.

- By cutting paper (figure out how to fold and cut it)
<http://snowflakes.barkleyus.com>
- By sticks (think how to connect them)
- By modules (rectangles, triangles, a module of your own)
- By appropriate software, e.g.
<http://www.math.bas.bg/omi/cabinet/content/bg/html/d22051.html>
- By a sketch, etude, dance or other art forms (individually or in a team)

6. Study each of the three snowflakes below. Each can be made by folding and cutting.
Which of the cutting on the right would produce the snowflake on the left side?



7. Try to find around you models of intended snowflakes which are wrong. Explain what is wrong about them.

8. Create your own problem dealing with snowflakes.

9. Try to find explanations of the following questions:

- Why do the snowflakes have 6-fold symmetry?
- Which factors influence the development of the snowflake?
- Is there red snow, why?
- How to take a picture of a snowflake?

11. And if you are already impatient to touch real snow, you could follow the example of the great English painter on snow Simon Beck?

<https://www.facebook.com/media/set/?set=a.10151187106064109.449370.98894589108&type=1>

<https://www.facebook.com/snowart8848>

