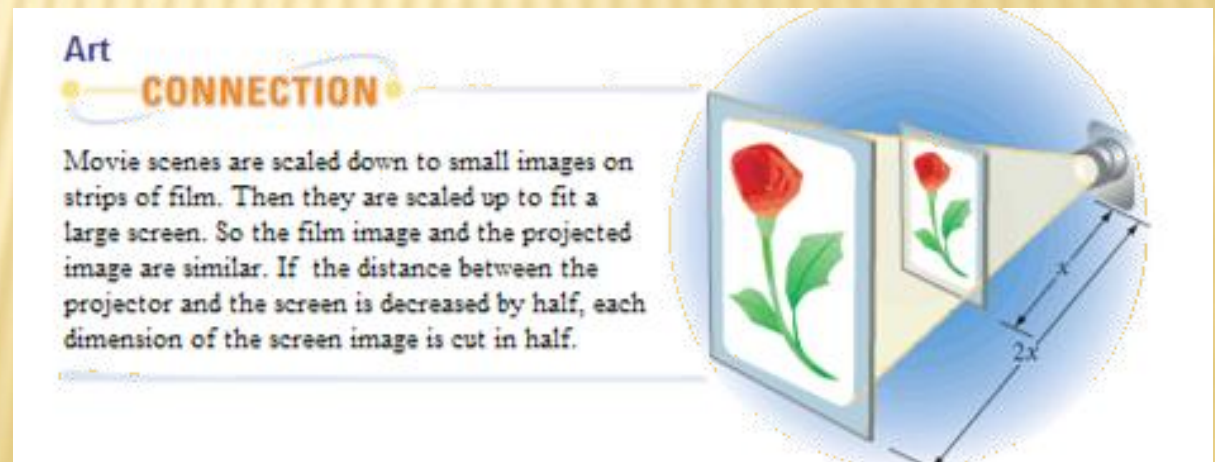
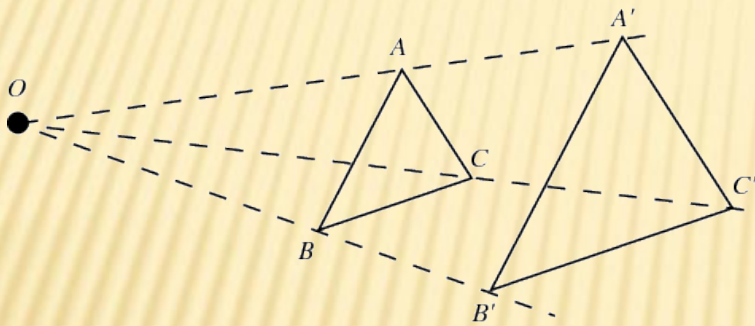


Mr. Kruczinski

# EXPLORATION : *CONSTRUCTING A DILATION DESIGN*

# WHAT IS A DIALATION?

- ✗ A nonrigid transformation that enlarges or reduces a geometric figure by a scale factor relative to a point.





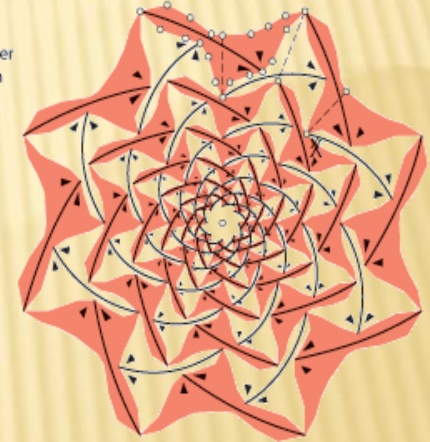
# PATH OF LIFE I – ESCHER



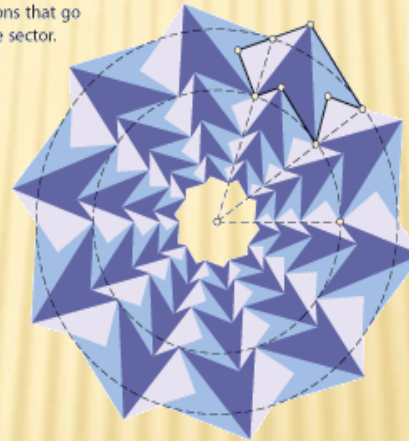
# EXTRA CREDIT OPPORTUNITIES

- ✕ Create your own dilation design in Sketchpad (pg.597)
  - + *Indicate what isometries you used to create the design.*
  - + *You can turn it into the digital drop box in BlackBoard or hand in a hard copy.*

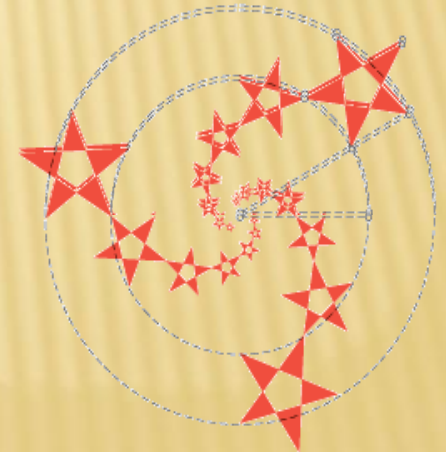
Mathematician Doris Schattschneider of Moravian College is an expert on M. C. Escher and the mathematics he explored. She made this sketch based on *Path of Life I*.



This design uses a different angle of rotation and polygons that go outside the sector.



This design uses a two-step transformation, a dilation followed by a rotation, called a **spiral similarity**.





# EXTRA CREDIT EXAMPLE:

- ✗ The image was formed from a dilation followed by a rotation (Spiral Similarity).

Diagram 1

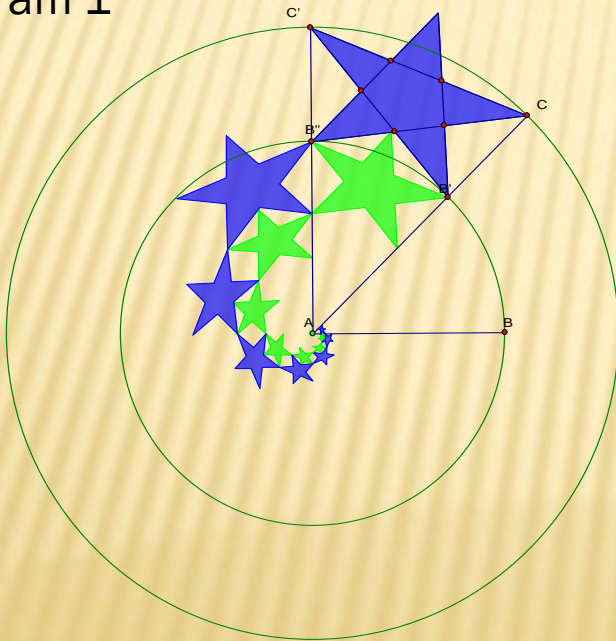
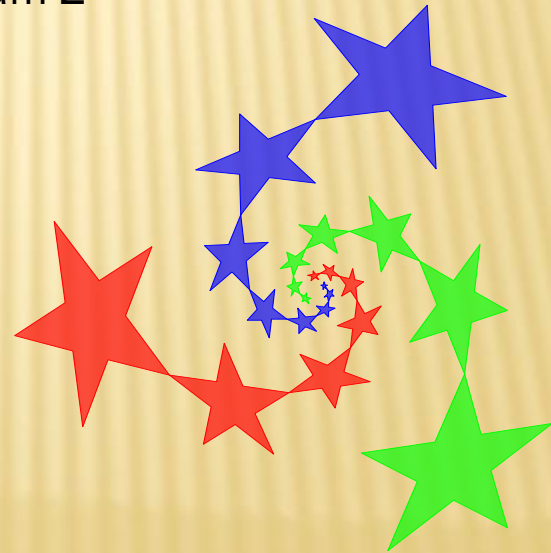
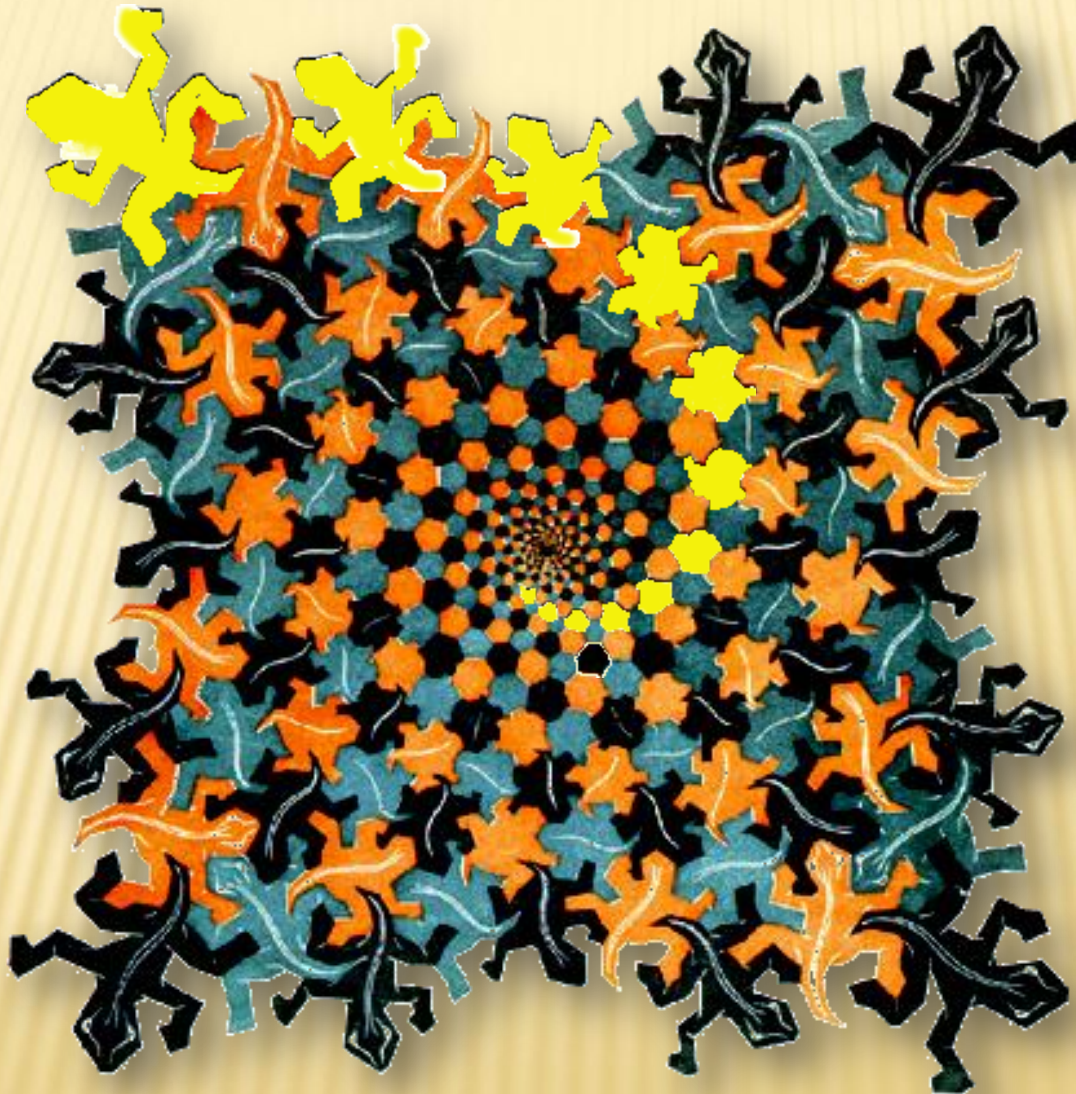


Diagram 2



# DEVELOPMENT II – ESCHER 1939





# WHIRLPOOLS – ESCHER'S 1957

