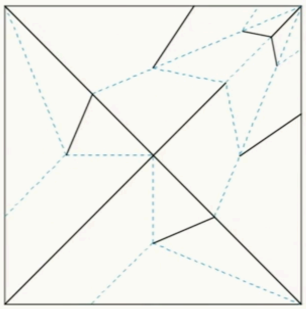
Origami Activity 3

Part 1: Butterfly
Construct this origami butterfly: https://www.youtube.com/watch?v=XWppAdgvEtI

Now unfold it so you can see the crease pattern.

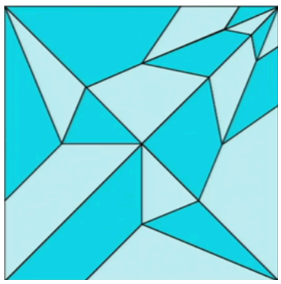
1. What is a mountain fold? What is a valley fold? Research online.

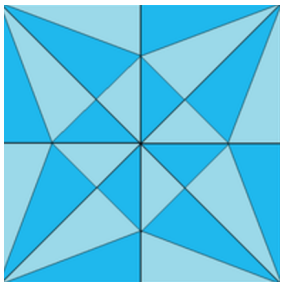
2. Mark the mountain and valley folds on your crease pattern.
    a. Use a bold line to mark the mountain folds.
    b. Use a dashed line to mark the valley folds.



3. Check that at any point where folds intersect (a vertex) the difference between the number of mountain folds and number of valley folds is two.

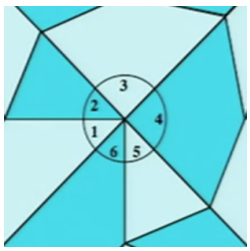
4. Origami crease patterns are always “two-colorable.” Below are two examples.
    a. What does “two-colorable mean?
    b. Why is this always possible to do on an origami crease pattern?





5. Show that your origami crease pattern is two-colorable (color it).

6. Number the angles around a point where the folds intersect (a vertex). Use a protractor to check:
    a. All the even numbered angles add up to 180 degrees.
    b. All the odd numbered angles add up to 180 degrees.



Part 2: Now construct an origami rabbit: https://www.youtube.com/watch?v=MAhe0FNviu8
Repeat exercises 2 - 6 with the origami rabbit’s crease pattern.