Fold again...and again

On a A4 sheet of paper

- Draw a small dot about 2.5cm/1inch from the bottom edge. Fold a corner so that the bottom edge goes through the dot.
- Do it many times in different ways, with both corners, making very good creases.

Q1: What shape is being described?

Q2: Can you prove it is so?

Hint: what does each fold mean geometrically?

Folding curves

Q1: What is a parabola?

Q2: What are the uses of parabolas in the world?

Q3: How would you explain the fold to your pupils?
Q4: What are the learning opportunities?

Q5: Do you know other uses of paper folding techniques in science and engineering?

Hint: go online and look for paper folding and telescopes.
**Q6:** In the previous fold you always folded the paper so that the dot would touch the line of the edge of the paper.

Try now the following: draw a circle on a piece of paper. Draw a point on the outer side the circle. Fold straight lines over and over again such that the dot touches the circle. What do you get?

On a fresh piece of paper try the same but this time draw the circle on the inner side of the circle. What do you get this time?

Try to use similar techniques as before to understand and explain your findings.