Trading Places

In 2007, I discovered a strange device folded from a strip of paper which could be manipulated in quite unexpected ways. When I sent this to Bob Neale, in 2017, he told me that he had already found it for himself about a decade earlier and had developed it into an effect in which areas of different colours trade places with each other.

Bob, of course, presents this as a magical effect, but it can also be presented as an effective paperfolding puzzle in the way explained here.

You will find a template for the puzzle on the last page of this pdf and a slightly larger one on the Puzzles page of my origamiheaven.com site.

David Mitchell

1. Cut put both halves of the template. Reverse the direction of all the creases and make sure they fold easily in both directions, backwards as well as forwards.
2. Apply glue to the flap shaded grey and join the two pieces into a long single strip in the way shown here. Allow the glue to dry.

3. Make five new diagonal creases as shown. Reverse the direction of all the new creases and make sure they fold easily in both directions.

4. Fold the left part of the strip diagonally upwards to the right as shown.

5. Fold the top part of the strip diagonally downwards as shown.
6. Fold the top part of the strip diagonally to the right as shown.

7. Tuck the flap marked with a circle out of sight underneath the other layers.

8. Fold the right part of the strip diagonally to the left as shown.

9. Fold the bottom part of the strip diagonally upwards as shown.

10. Fold the bottom left part of the strip diagonally to the right as shown.
11. Tuck the small triangular flap marked with a circle out of sight underneath the other layers.

12. Turn over sideways.

13. Fold the loose triangular flap diagonally across to the right as shown.

14. Apply glue to the flap shaded grey then fold the loose flap down on top of it to join the strip into a continuous band.

15. Trading Places is complete. Allow the glue to dry.
16. You will see that at present there is a green diamond in the centre of the puzzle with pink half diamonds on either side, both on the front and on the back. The challenge is to manipulate the puzzle so that the position of the colours is reversed, both on the front and on the back. You do not need to add any extra creases to the paper to achieve this transformation.