PROJECT LIST

You should look into and then eventually choose one of these topics. Initially choose a shortlist of 3 in case another potential group has chosen the same topic. Then you will have to discuss, and agree on, which group pursues which topic.

1. Ciphers and modular arithmetic.

2. Permutations: derangements, descents and pattern avoidance.

3. Lucas numbers and recurrence relations.

4. Graph colouring.

5. Pascal's triangle and binomial coefficients.

6. Latin squares.

7. Triangle numbers and generalizations.

8. Partition identities.

9. Number tricks.

10. Partially ordered sets.

11. Littlewood-Richardson coefficients: generalized sudoku.

12. Catalan numbers and their properties.