3.2 Lesson 1 Relative frequency with Grim dice

1) Pick red and blue die. Why are these dice different to normal? Which is better? Why? Which one would beat the other? Why? How would you find out which is better? How will you keep score?

2) Battle de dice 10 times and keep score. What results did we all get? Why do you have different numbers of wins? Which do you think is better now ? How can we be sure?

3) If your dice carry on behaving the same way, how many Reds would you expect out of 20 rolls? Out of 100 rolls? Out of 1000 rolls?

4) Continue rolling to 20 or so trials. Which do you think is better now ? How can we be sure?

5) The relative frequency of an event is the number of times that the event occurs during experimental trials (absolute frequency), divided by the total number of trials conducted. What are your relative frequencies for blue and red dice.

6) Roll the dice for 3 more minutes and record your results. What is your relative frequency now? Which dice do you think is better? How many Reds would you expect out of 1000 rolls?

7) Repeat with Red and olive dice.
   a) Which do you think is better? (Before rolling)
   b) Experiment
   c) Find relative frequency
   d) Compare with others
   e) How many Olives would you expect out of 1000?
   f) Write a conclusion, explaining your decision

8) Repeat with the Blue and Olive dice.

9) Conclusion