

Exercise inspirations

- Concept of superposition without explicitly stating linear combination.

↳ create a task on how blending colours Red, Green and Blue work.

They span the colour space and this idea of combining colours can be extended to quantum superposition with $|0\rangle$ & $|1\rangle$ instead of R, G & B

- give initial state, a desired final state & ask the student to find a route using the quantum gates introduced during the lecture

↳ can also be adapted into a

relatively easy quantum maze
game with pathway to the final
state & decoherence like the
monsters in the maze disrupting
the path

- a physical tangible model of Bloch
sphere.

↳ ask the student to move a
state around the Bloch sphere
like a clock hand to get
comfortable with the idea of
single qubit & gate applications.