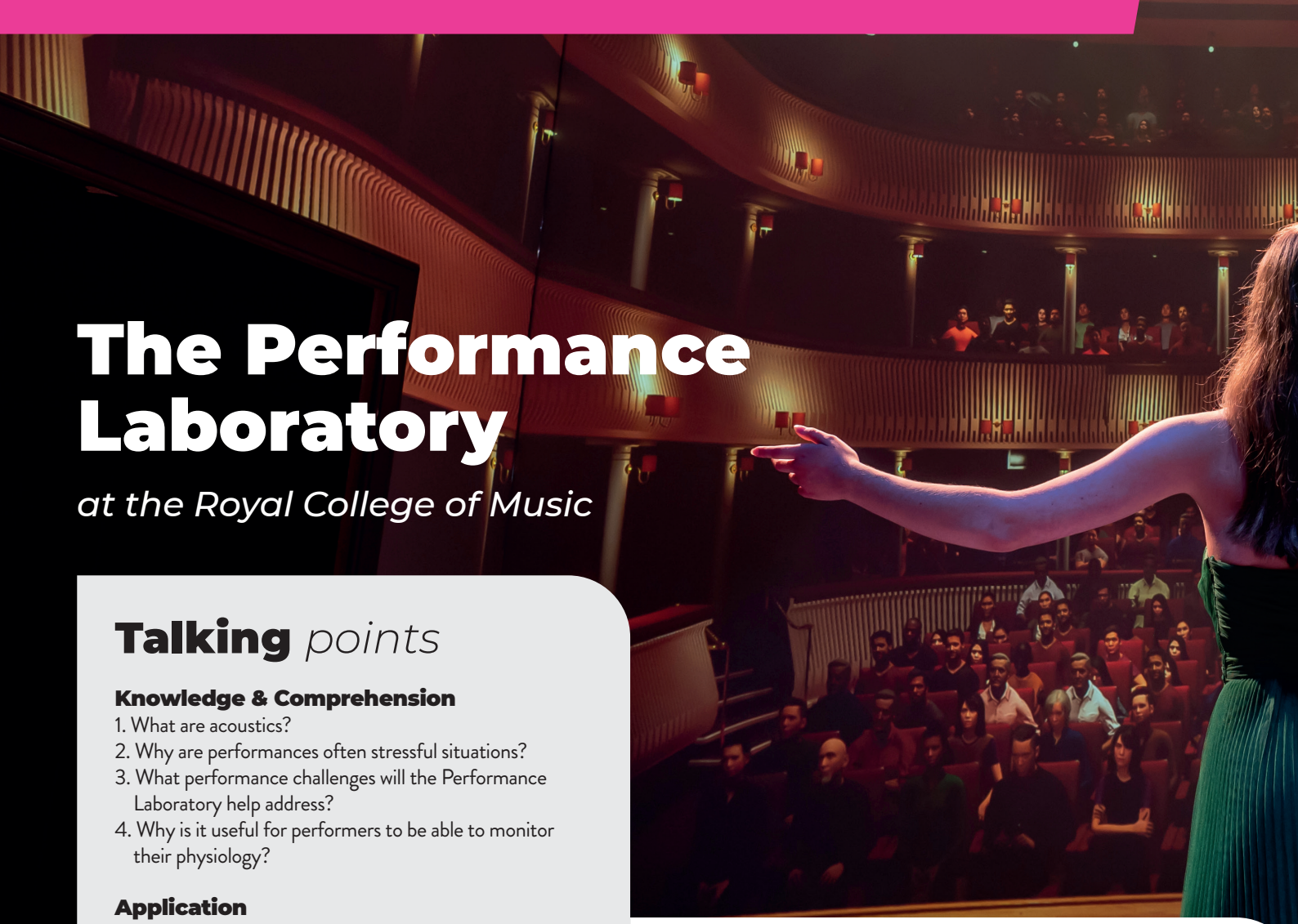


The Performance Laboratory

at the Royal College of Music

Talking *points*

Knowledge & Comprehension

1. What are acoustics?
2. Why are performances often stressful situations?
3. What performance challenges will the Performance Laboratory help address?
4. Why is it useful for performers to be able to monitor their physiology?

Application

5. Aaron says that athletes, tech executives, entrepreneurs and civil servants have all used the Performance Laboratory. How do you think the simulator can benefit these different groups of people?
6. If you had the chance to experience the Performance Laboratory, what do you think it could help you with?
7. What sorts of disruption to performances do you think are most common? How can the simulator assist performers in adapting to these disruptions?

Analysis

8. Which areas of the project do you think Aaron, Richard and George each focused on? Consider their specific areas of expertise in your answer.
9. While the Laboratory effectively simulates performance environments, performers still know that it is a simulation. To what extent do you think this is likely to affect the way they perform, as compared to a real live performance? How might a performance scientist test for differences?

Evaluation

10. Music technology is advancing rapidly, to the point that artificial intelligence can generate and produce entire compositions. To what extent do you think this poses a threat to music technology careers, and why?
11. The Royal College of Music's first Performance Simulator was launched over a decade ago. What do you think an 'upgrade' of the new Laboratory in another ten years might involve?

Activity

Though you are unlikely to have the cutting-edge technology found in the Performance Laboratory to hand, you can use classroom equipment to combine performance, technology and performance science.

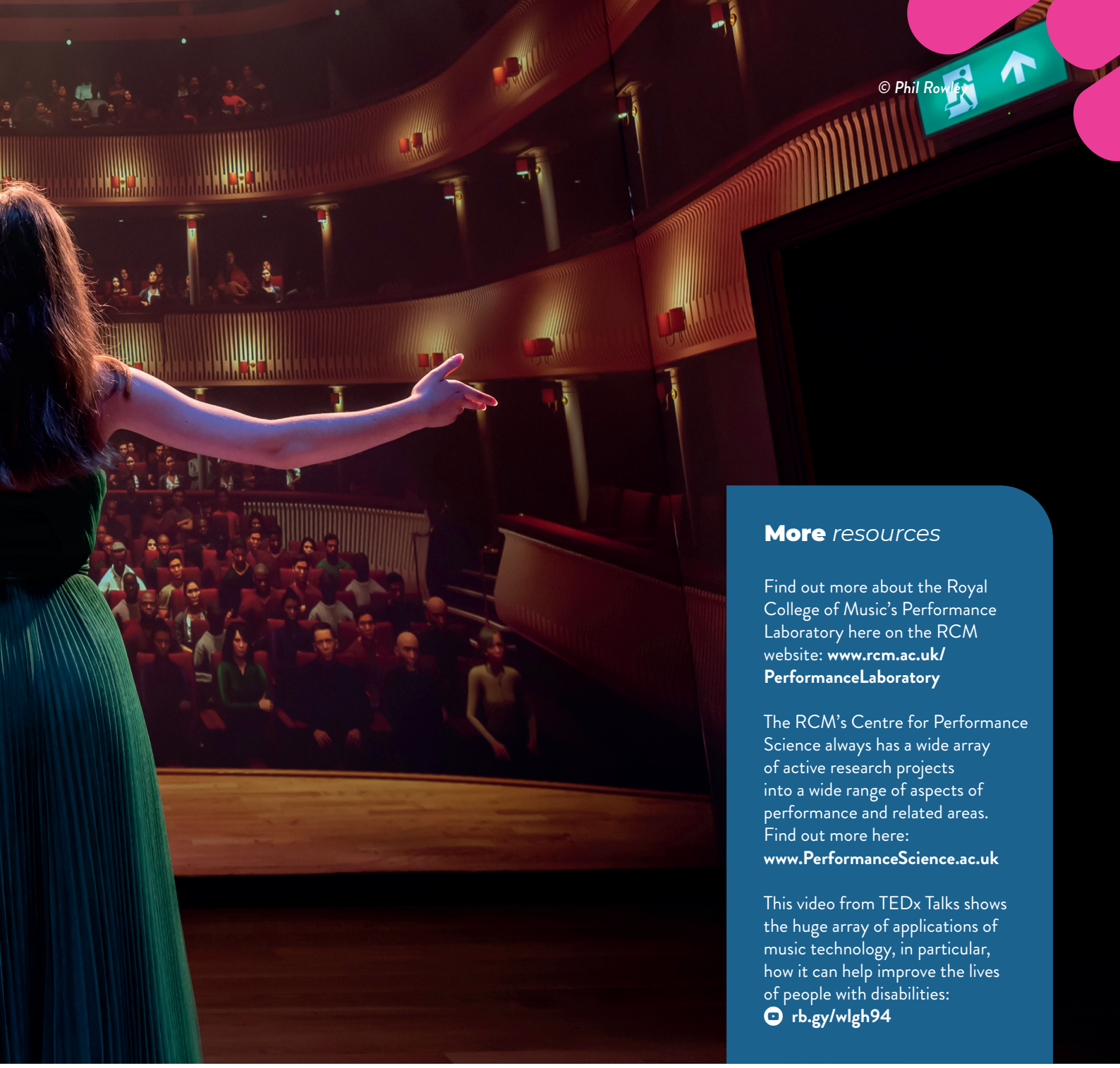
Design an experiment that tests how the characteristics of an audience affect the quality of a performance.

The following lists give examples of how you could design each part of your experiment – but it is your experiment, so feel free to choose different examples. Always remember the following:

- Independent and dependent variables must be easily and accurately measurable.
- Other variables should be controlled as far as possible. This is likely to include the performance space, presence of other people, lighting, temperature and possible disruptions.
- Your participants must give full informed consent prior to taking part, and efforts should be made to respect their privacy.

Depending on ability/comfort/setting, your participants could 'perform' by:

- Reading a poem or piece of prose
- Playing an instrument or singing
- Dancing
- Playing a sport / doing a physical activity (something relatively stationary shooting a basketball hoop, perhaps)



More *resources*

Find out more about the Royal College of Music's Performance Laboratory here on the RCM website: **www.rcm.ac.uk/PerformanceLaboratory**

The RCM's Centre for Performance Science always has a wide array of active research projects into a wide range of aspects of performance and related areas. Find out more here: **www.PerformanceScience.ac.uk**

This video from TEDx Talks shows the huge array of applications of music technology, in particular, how it can help improve the lives of people with disabilities: **rb.gy/wlgh94**

Your audience/s could be:
- A single real person
- A larger real audience (e.g., your class)
- A single virtual person (e.g., a video like this: **rb.gy/w5s5oi**)
- A large virtual audience (e.g., a video like this: **rb.gy/lzk0no**)

The characteristics of the audience could change by:
- Being large or small
- Being real or virtual
- Level of receptivity (e.g., attentive versus bored)
- Level of disruption (e.g., silent versus whispering)

You could measure performance 'quality' through:
- Number of mistakes (e.g., misspoken words, unplanned repetition)
- Physiological characteristics (e.g., heart rate, breathing rate)
- Level of perceived nervousness

Design your experiment and recruit participants to take part. Make sure that data is recorded anonymously and as non-intrusively as possible.

Once you have run your experiment with a sufficient number of participants, analyse your results and display them graphically, if possible. Answer the following:
- What interesting observations have you made?
- To what extent do you feel your results are valid?
- What were the limitations or weaknesses of your experiment?
- What were the strengths of your experiment?
- What lessons does your experiment have for helping people increase performance quality?