



Constrained Sprints

The Task

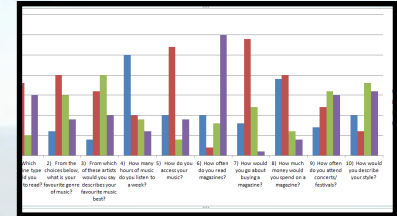
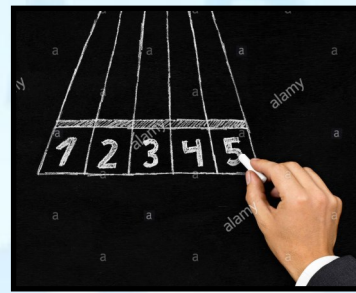
To work out which body parts contribute to sprinting.

How?

- The pupils will time themselves sprinting along a set distance.
- They will start by setting an initial control time running freely without constraint.
- They then time their runs using different constraints in their running technique:
 - keeping their arms by their side, keeping their legs straight, keep their head still etc.
- After trying different constraints look at the times and compare and contrast how different constraints had an effect on their times.
- This could lead to discussions about the usage of different muscle groups and how they work together.

Considerations

- Set an appropriate sprint distance.
- What made the biggest difference to the times?
- Are there trends in the data across all participants?



What will you need?

Chalk for marking track.
 Outdoor writing material for recording results.
 Method of timing - a giant timing clock all could see would be ideal or individual timers.





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Organisation & Layout

- Set up track up in school ground.
- Divide into working groups of 3-4.
- Ensure each group has recording, writing materials and a timing method.
- Allow groups to work through a list of constraints observing and questioning results and outcomes.

Safety Information

- Ensure track is clear and pupils have appropriate clothing and footwear.
- Ensure all laces are tied well.
- A variety of restrictions would be good but consider how each restriction might affect pupils ability to balance and stay upright.

Learning Objectives

- As I encounter new challenges and contexts for learning, I am encouraged and supported to demonstrate my ability to select, adapt and apply movement skills and strategies, creatively, accurately and with control. **HWB 2-21a / HWB 3-21a**
- I practise, consolidate and refine my skills to improve my performance. I am developing and sustaining my levels of fitness. **HWB 2-22a / HWB 3-22a**
- By reflecting on my own and others' work and evaluating it against shared criteria, I can recognise improvement and achievement and use this to progress further. **HWB 2-24a**

Review & Assessment

- For closer analysis of the effects of the constraints, videos of the sprints could be made and viewed (use an iPad?).
- Results could be converted into speeds rather than timings.
- After trying different constraints look at the times. Compare and contrast how different constraints had an effect on their times.
- This could lead to discussions about the usage of different muscle groups and how they work together.

Additional Links & Support

[Blairvadach Constrained Sprints—YouTube](#)

[Some fun sprinting game ideas—YouTube](#)

[Biomechanics of sprint form - YouTube](#)

