Guide To Demonstrating

CHaOS SCIENCE ROADSHOW

For Inspiration...

- Can you think of any good science communicators?
  (e.g. a teacher, lecturer, writer, TV/radio presenter…)
- What makes anyone you know a good/bad communicator?

General Points...

- Try and get the level right - *break things down simply and in an accessible way, perhaps using analogies, but without being patronising*. ***Don't worry if this takes a few tries to get right, you'll soon get the hang of it!***
- Don't use too much jargon - *introducing one or two key terms might be fine but don't assume they know many technical words*.
- Be enthusiastic and make science fun - *we want this to rub off on them!*
- Speak clearly and in an interesting way - *don't just read off notes and vary your voice to avoid a monotone*.

Basics of the CHaOS Format...

- At an event, each demonstrator is assigned their own experiment (sometimes two) for the day - on summer tour you can often pick yourself!
- Each experiment comes in a **box** with (usually) everything you need.
- You'll be given a Risk Assessment (*"RA"*) with important safety details, which you must read - **you're required to sign to say you've followed it before starting**.
- But an RA is so much more! The sheets (*also available online*) also have a **guide to the experiment** with some wisdom collected over the years about the science behind the experiment and how to demonstrate it. **This is not a script** or list of objectives so feel free to deviate from it and discuss things in your own way.
- The audience is ~ 6 students at a time in schools, or 1-2 family-sized groups at public events. Each demo lasts ~10 minutes (depending on exact event type).
- If you are unsure about your experiment **please ask a committee member** - they'll be very happy to give you some advice or assistance!

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Benefits of the CHaOS Format...

- ★ The small group sizes **allow everyone the chance to get hands-on**.
- ★ It also creates a friendlier environment for them to **ask and answer questions**.
- ★ You can **tailor each demonstration** to the audience.

Adapting to the Audience...

- **Age** is likely to be the single most important factor - *try to remember when you encountered different concepts in school*.
- However, individuals may be ahead/behind in **scientific knowledge/ability** compared to your expectation - this may depend on e.g. their interest levels or any (dis)advantages. *Be patient and ask lots of questions to gauge their level*.
- "**Science Capital**" is the notion of a "bag" of experiences or contexts that help someone engage with science (ASPIRES project), for example: museums they have visited, documentaries they have watched, family professions etc. *Identify these hooks ("Have you ever broken a bone?"), show you value any contributions they raise, and link them into what you are teaching them about to cement ideas.*
- Similarly, try linking what you are talking about to any **interests** they have. *Do they play an instrument that you can explain how it makes sound? Do they like a sport with a common injury that you can show them on the skeleton?* This helps **show how science is important to their lives**.
- People have **learning styles**: *be flexible if they prefer listening/doing/watching.*
- If their attention is waning move on to a more exciting bit, or wrap things up entirely so they can explore another demonstration.

Find Your Own Style...

- Some people are story-tellers: they build a linear narrative that builds up from basic ideas first, but may need to keep the audience's attention for longer.
- Other people prefer a more random approach: there are lots of items you could talk about - see what takes the audience's interest.
- Some styles are better suited to different experiments - see what works for you.