

# Build Your Own Particle Detector

- ✧ First decide on the aim of your experiment
  - ✧ There are three to choose from
- ✧ Next, decide which type of accelerator is best for your aim
  - ✧ There are two to choose from
  - ✧ Remember that the LHC can also collide heavy ions
- ✧ Finally you need to decide which types of detector you will need. You will need one of each of the following:
  - ✧ A Tracker
  - ✧ A Magnet
  - ✧ A calorimeter
  - ✧ You may also wish to add particle identification, but this depends on the aim of your experiment
- ✧ Your experiments will be judged by the “funding agency” and the best one will be awarded a prize!
- ✧ Remember that it is not always the cheapest detector that gets the funding, but the one that offers best value for money

**GOOD LUCK!**



## What to include on your Poster

Impressing a funding agency with your detector proposal is mainly about the design choices you have made, but presenting them in an interesting way is important too. How you design your poster is up to you, but here are some pointers about what it should include ...

- ✧ Every good experiment has a good name and (sometimes) a good logo
- ✧ Make sure to describe your choices for the following:
  - ✧ Aim of the experiment
  - ✧ Choice of collider
  - ✧ Make-up of your detector
- ✧ You should explain very briefly why you made the choices you did
- ✧ Try to include pictures – they are more interesting to look at than lots of words!
- ✧ Finally, don't forget to tell us how much your collider and your experiment will cost ...

