The Practical Endorsement Standard (Geology)

CPAC 1: Following written instructions

- Some scaffolding in a range of procedures.
- Learners able to cope with different complexities.
- Prompting when it's an unfamiliar or novel piece of equipment or technique or a particular health and safety issue.
- Best practice would show a difference in the amount of detail / structure of worksheets between year 12 and year 13.
- By the end of the course, learners should be able to interpret continuous/bullet pointed written prose, not a diagrammatic flow chart.
- Learners should not need to be talked through the practical.

CPAC 2: Applying investigative approaches

- About choice. Learners shouldn't be given full methods for everything.
- Learners gaining in fluency in their practical work – problem solving and doing things without prompting.
- Risk taking – not scared to try things and/or to get them wrong.
- Look for the "thinking behind the doing".
- No need to do a full investigation.
- Give learners a challenge.
- Try to move away from the given method – as it tends to constrain.
- Investigations should be open-ended in nature.

CPAC 3: Safely uses a range of practical equipment and materials

- The important aspect of this criterion is that the learners are working safely in the classroom/field and are responding safely.
- Risk assessments are not essential.
- Treating apparatus, chemicals and the natural environment with "respect".
- Not endangering others / awareness of others.
- Dealing with things that go wrong.
- General organisation of working space and self-management.
- Safety literacy – responding appropriately to written or symbolic hazard warnings.
- Can be assessed verbally without requiring it to be written down.

CPAC 4: Makes and records observations

- Important to look at what's been written down, but also about how the learners record data during the practical activity. E.g. writing the mass down when at the balance, recording dip and strike at the time the readings are taken. Being methodical in their observations.
- Suitably accurate observations relative to the type of activity you're doing.
- Recorded observations reflect the resolution of the equipment.
- Tables should not be filling in the blanks. Right headings. Units clearly shown.
- Raw data should be displayed.
- Processing of data is not included in CPAC 4.

CPAC 5: Researches, references and reports

- More about how to get to the conclusion / result, not about how much scaffolding the learner needed to write it down.
- Must relate to a practical activity.
- Learners should understand what they've found.
- Can be linked to planning and evaluation.
- On occasions do research at various stages.
- Checking values – looking at the quality of sources consulted would tend to go further than required.
- Manipulation of raw data with calculators or spreadsheets to support planning and/or conclusions.
- Consistent use of a particular referencing system is likely to be beyond the CPAC standard but must be able to retrieve original article (e.g. page in book or webpage).
- Report findings is not necessarily a full written report – e.g. perfectly acceptable to see a graph plot or an annotated photograph or further processing to reach a conclusion
- Conclusions will often relate to the science behind a practical activity, and learners may research this, however sometimes conclusions may simply be a statement of findings.