



Year 11 Suggested practical activities

Experiments, investigations, demonstrations and exercises – most are from the present 4th Edition of Pearson *Heinemann Chemistry 1 and 2 TRAB* or 3rd Edition TRB for Year 11 and Year 12.

They are available as pdfs on the Pearson places website under resources for the respective Unit materials.

Unit 1

Number	Type of activity	Name of activity	2015 source of activity
1	Experiment	Flame tests	4 th Ed TRAB Chem 1
2	Exercise	The periodic table	4 th Ed TRAB Chem 1
3	Exercise	Periodic variation in properties of the elements	4 th Ed TRAB Chem 1
4	Exercise	An investigation of ionisation energies	4 th Ed TRAB Chem 1
5	Experiment	Oxidation states of transition metals	4 th Ed TRAB Chem 2
6	Experiment	Modelling metallic lattices	4 th Ed TRAB Chem 1
7	Experiment	Reactivity of metals with water, acids and oxygen	New
8	Experiment	Growing metal crystals	4 th Ed TRAB Chem 1
9	Experiment	Investigating sodium chloride	New
10	Experiment	Growing crystals of ionic compounds	New
11	Experiment	Mole simulation and applications	4 th Ed TRAB Chem 1
12	Experiment	Chemical composition of a compound	4 th Ed TRAB Chem 1
13	Experiment	Making molecular models	4 th Ed TRAB Chem 1
14	Experiment	Comparing the physical properties of different covalent lattices	4 th Ed TRAB Chem 1
15	Experiment	Buckyballs, nanotubes and other allotropes of carbon	4 th Ed TRAB Chem 1
16	Exercise	Modelling and naming alkanes	4 th Ed TRAB Chem 2
17	Exercise	Analysis of the physical properties of the first eight hydrocarbons	4 th Ed TRAB Chem 1
18	Experiment	Investigating hydrocarbons	4 th Ed TRAB Chem 1
19	Experiment	Modeling functional groups and organic reactions (in Year 12 as well – suggest do in Y11 to save time in Y12.)	4 th Ed TRAB Chem 2
20	Experiment	Reactions and properties of some organic compounds (possibly better saved for Year 12)	4 th Ed TRAB Chem 2
21	Experiment	Preparing artificial fragrances and flavours (Suggest do in Y 11 to save time in Y12)	4 th Ed TRAB Chem 2
22	Experiment	Making ghost-buster slime	4 th Ed TRAB Chem 1
23	Experiment	Modelling polymers	4 th Ed TRAB Chem 1
24	Demonstration	Making a condensation polymer to form the amide nylon (<i>re-naming for Making a condensation polymer</i>) (Could be redone for Year 12 with emphasis on the amide group)	4 th Ed TRAB Chem 1

Unit 2

Number	Type of activity	Name of activity	2015 source of activity
1	Investigation	Properties of water	4 th Ed TRAB Chem 1
2	Demonstration	Effect of polarity on solubility	4 th Ed TRAB Chem 1
3	Investigation	Analysis of local water	4 th Ed TRAB Chem 1
4	Experiment	Stalagmite from a supersaturated solution	4 th Ed TRAB Chem 1
5	Experiment	Precipitation reactions	3 rd ed TRB Chem 1
6	Experiment	Purification of polluted water	4 th Ed TRAB Chem 1
7	Experiment	Deriving a solubility curve	3 rd ed TRB Chem 1
8	Experiment	Beetroot: A natural indicator	4 th Ed TRAB Chem 2
9	Demonstration	Universal indicator colour display	4 th Ed TRAB Chem 1
10	Experiment	Strong and weak acids	4 th Ed TRAB Chem 1
11	Experiment	Amphiprotic substances in water	4 th Ed TRAB Chem 1
12	Experiment	Reactions of hydrochloric acid	4 th Ed TRAB Chem 1
13	Experiment	Dilution	4 th Ed TRAB Chem 1
14	Demonstration	Oxidation-reduction reactions	4 th Ed TRAB Chem 1
15	Experiment	Corrosion 1	4 th Ed TRAB Chem 1
16	Experiment	Corrosion 2	4 th Ed TRAB Chem 1
17	Experiment	The reactivity series of metals	4 th Ed TRAB Chem 1
18	Experiment	Products of a decomposition reaction	4 th Ed TRAB Chem 1
19	Experiment	Gravimetric analysis of chicken soup	4 th Ed TRAB Chem 2
20	Experiment	Gravimetric determination of sulfur as sulfate in fertilizer	4 th Ed TRAB Chem 2
21	Experiment	Colorimetric determination of phosphorus content in lawn fertiliser	4 th Ed TRAB Chem 2
22	Exercise	Concentration of caffeine in a cola drink by UV-visible spectroscopy – data analysis	4 th Ed TRAB Chem 2
23	Exercise	AAS - Determination of concentration of iron in a breakfast cereal - data analysis	4 th Ed TRAB Chem 2
24	Experiment	Chromatography of inks and smarties	4 th Ed TRAB Chem 2
25	Experiment	Preparation of a standard solution	4 th Ed TRAB Chem 2
26	Experiment	Analysis of brick cleaner	4 th Ed TRAB Chem 2

In blue:

These have been recommended for Year 11 and Year 12 and will appear in both books.