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PHYSICAL SCIENCE

FQRH 1

A. PHYSICS

1. MATTER

(u) Tge variatg of matter: examination or uatthr, proportion of matter, us. of the magnifying 91893.. "

(b) Raw materials: building industry, Chemical indu5try

(c) The earth and it: rocks: igneous, sedimentary & notanorphlc.

(d) Metals: pure. oroe, alloys.

(3) Solid. liquid. 96". "Ice, auto: and steam. Effect: of heating and cooling.

(f) Elements: compounds

(g) The Microscogox. various parts, viewing

(h) 5522:; the 71916 Ion microscope

(1) Sciantiuta & Detectives: Ilmilartties . .

2. CRYSTALS

(a) Examination of crystals, size. shape

(b) watching crystals grow (experiments with salt cryaEalc)

(c) Crzetal models and atoms: Use smoats, polyaterino balls or a baseboard and balls., '

(d) Cleavlng crzatalea demonstrate with graphite

(a) Crzatalea dissolviggt volume chango. unthing salt crystals dissolve under a microscope.

(9) Growing a large crzatales alum crystals. copper aulphato cry.-

(9) E2ngg;gg: 0.9. of water.

M.: (N) -Fignttgd cad gglzggrgl Collulosn. artiagnnnnt. artificial

M1 polyI-ro.

3. HEASURING

(a) The need to moanurng in everyday 11?.

(h) Thu motor: dofinittion. division.

(0) mnaaurigg laggtths antric-nlndadnaoa. antinatas and rough naasur-lontl.

%; (d) Accurucz and averages;

'g (I) Haasurigg largo distances: kiloultorl. using a whoul. nap 55L Ionian, radar triangulation.

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(9) Power; of 10: lun-Inrth dlotlnco - 1.5×10 kn

(9) ullllgglgg small lengthuu nllllinotnro. thickncoo

(h) 9 Iugg1Eg Irons: Arcn-Longth X Broath. arc. of I country from o IBI I of the map

(1) xglgggp Iolldu Ind liquldu, trrogullr collu-

(J) Eznnlauz.au_xalunna

(k) nigguggng_gtagp o-cln-blnu tin. Int-rvnlo

WEIGHING

- (a) weight and mass kilogram. division. definition
- (b) weighing solids! .120 and weight '
- (c) Oensltz
- (d) Watchlugg igguidn: Finding the density of liquid
- (a) weighing air: finding the density of air
- (f) Densities and molecules: dry Ice changing into gas
- (9) Invisible force... magnetic force, floating magnet
- (h) Floatlugg and sinkluggs
- (i) Balances: A Inpla balsam", a microbalance

LEVERS AND SPRINGS

- I (a) Levers: see-eas. pivot or fulcrum, balancing problems
- (b) Stretching materials' elastic materials and their uses.
- (c) Atoms and molecules: repelling and attractive forces.
- (d) Looking at sewage: cuppa mm: SPRING
- (o) Importance of graphs in plotting readings from experiment.

PRESSURE

force-

- (a) Pressure in everyday life, pressure
- (h) Liquid pressure a liquid finds, its own weight, water pressure.
- (c) atmospheric pressure experiments
- (d) Bourdon pressure gauge U-tube manometer. water manometer, mercury manometer.
- (a) Barometric pressure: Atmospheric pressure. making a simple barometer.
- (f) Aneroid barometer: 1t. noon
- (9) Water air pressure oxanplou
- (h) The earth's atmosphere four main regions of, space travel

MOLECULES

- (a) Odour of gases an example of presence of molecules
- (5) Brownian motion x-ray experiments
- (c) Diffusion: demonstrations
- (d) Kinetic theory through states of matter. use model
- (a) Skin of fat of volcanic. in liquid UII thin to illustrate the thickness of an oil film and the area of a molecule.
- (f) The Angstrom unit & ; x-ray 2 NAWMM

8. ENERGY

- (a) Work. food and fuel
- (b) Energy and some of its forms: chemical, uphtli, motian, springs, electrical arnagias.
- (c) Atomic energy: atomic reactor. atomic bomb
- (d) Radioactive atoms: cloud formation
- (a) cloud chamber (expansion, diffusion, spark counter)

- a. cnsnxSrav
1. A1: and burning
2. Ongan: acetylene. catalyst. equations
3. Nitrogen: proteins
4. Carbon Dioxide: fornantatlon. 11-. veto:
5. Carbon Dioxide and living thtggg: bicarbonat- indicator
raoplratlan.
6. Respiration:
7. Photoaxnthuaia:
8. Xndicatoga: acid a alkali. affect on litmus Universal
Indicators. pH scale. other indicators. neutralization.
concentration.
9. Salts: a aalt. chloiida. oulpata
10. Carbonatee with acggg
11. Hotels urth acids: Reactivity antics
12. Rat: of reaction
13. szgggant Physical and chemical propartiuu. uses. preparation
Industrial manufacture
14. Oxxgena Lavoslar'a experiment, discovery. physical and
- chemical properties. usou. roapitation.
15. carbon excl:
16. Nitrogen excl.
17. Atomic thaorz! Dalton'u Atomic Theory
olnplo 1600. about Ilactrona, noutronu. and protons.
ulnplo structure of tho uton- of hydrogen. carbon
dloxlda. numonll.