



INDIAN SCHOOL AL WADI AL KABIR

DEPARTMENT OF SCIENCE 2019 -2020

Holiday Assignment for Winter Break - Class IX – SCIENCE

SUBJECT	HOMEWORK
PHYSICS	<p>Solve the worksheet on Force and laws of motion</p> <p>Complete the Journal</p> <ol style="list-style-type: none">1. Verification of the Laws of reflection of sound.2. Determination of the speed of a pulse propagated through a stretched string/slinky (helical spring).
CHEMISTRY	<p>Solve the worksheet on Atoms and Molecules</p> <p>Complete the Journal</p> <ol style="list-style-type: none">1. Determination of the melting point of ice and the boiling point of water.2. Preparation of: a) a true solution of common salt, sugar and alum b) a suspension of soil, chalk powder and fine sand in water c) a colloidal solution of starch in water and egg albumin/milk in water and distinguish between these on the basis of • transparency • filtration criterion • stability3. Preparation of a) A mixture b) A compound using iron filings and sulphur powder and distinguishing between these on the basis of: (i) appearance, i.e., homogeneity and heterogeneity (ii) behaviour towards a magnet (iii) behaviour towards carbon disulphide as a solvent (iv) effect of heat4. Separation of the components of a mixture of sand, common salt and ammonium chloride (or camphor).5. Perform the following reactions and classify them as physical or chemical changes: a) Iron with copper sulphate solution in water b) Burning of magnesium ribbon in air c) Zinc with dilute sulphuric acid d) Heating of copper sulphate crystals e) Sodium sulphate with barium chloride in the form of their solutions in water6. Verification of the law of conservation of mass in a chemical reaction.
BIOLOGY	<p>Solve the worksheet on Improvement in Food Resources</p> <p>Complete the Journal</p> <ol style="list-style-type: none">1. Preparation of stained temporary mounts of (a) onion peel, (b) human cheek cells & to record observations and draw their labeled diagrams.2. Identification of Parenchyma, collenchyma and Sclerenchyma tissues in plants, striped, smooth and cardiac muscle fibers and nerve cells in animals, from prepared slides. Draw their labeled diagrams.3. Study of the characteristics of Spirogyra, Agaricus, Moss, Fern, Pinus (either with male or female cone) and an Angiospermic plant. Draw and give two identifying features of the groups they belong to. (Diagrams to draw Spirogyra and Moss only)4. Observe the given pictures/charts/models of earthworm, cockroach, bony fish and bird. For each organism, draw their picture and record: a) one specific feature of its phylum. b) One adaptive feature with reference to its habitat. (Diagrams to draw Earthworm and Bony Fish only)

Prepared by Gerard Thomas

19TH December 2019