KENDRIYA VIDYALAYA ADILABAD

Class X Science - Autumn Break Holiday Homework

The objectives of the 10-day autumn break holiday homework for Class X Science are aligned with experiential, activity-based, and independent learning principles:

DAY-BY-DAY ACTIVITY & EXPERIENTIAL PLAN

Task 1: Chemical Substances - Acids, Bases, and Salts (Days 1-2)

- **Activity (Household pH and Neutralization Audit):** Test common kitchen and bathroom items (lemon juice, vinegar, baking soda solution, soap, and common salt water) using turmeric or a natural indicator. Observe and note neutralization reactions.
- **Deliverable:** A neat observation log detailing color changes, inferred nature (acidic/basic/neutral), and everyday uses of salts.

Task 2: Metals and Non-Metals (Days 3-4)

- **Activity (Corrosion & Property Audit):** Inspect iron objects around the house for rusting conditions. Compare physical properties (malleability, ductility, appearance) of household metallic items versus non-metallic items.
- **Deliverable:** A short comparative data table and a reflection on practical methods used at home to prevent metal corrosion.

Task 3: Biology Special Assignments & Life Processes (Days 5-6)

- **Activities (Assigned Tasks):**
  - Prepare a chart showing the major endocrine glands and the hormones they secrete.
  - Observe a potted plant placed near a window and record the direction in which its shoot grows (Phototropism).
  - In a monohybrid cross between two heterozygous tall pea plants (Tt × Tt), determine the possible genotypes and phenotypes of the offspring.
  - Prepare an awareness poster on reproductive health, hygiene, and responsible behaviour.
- **Deliverable:** Completed charts, genetic cross calculation notes, awareness poster, and shoot growth observation record.

Task 4: Light - Reflection and Refraction (Days 7-8)

- **Activity (The Lens and Mirror Lab at Home):** Use a clean stainless-steel spoon as a spherical mirror to observe inverted and erect real/virtual images of your face. Use a magnifying glass (convex lens) to focus sunlight onto a paper sheet (under safe adult supervision) to estimate focal length.
- **Deliverable:** A brief experiential note explaining image formation differences observed using concave and convex surfaces of the spoon.

Task 5: Electricity & Scientific Inquiry (Days 9-10)

- **Activities & Inquiry:** Check the wattage labels of common household appliances to understand power consumption. Conduct an inventory of daily waste generated at home.
- **Deliverable:** Electrical/waste audit tally and the written reflection on your new scientific inquiry.

ASSESSMENT & SUBMISSION GUIDELINES

1. **Format:** Compile work neatly in a single thin, eco-friendly paper notebook or loose-leaf folder. Avoid heavy plastic covers.
2. **Parental Role:** Parents are requested only to ensure safety during practical tasks; all calculations and written observations must be strictly student-driven.

KENDRIYA VIDYALAYA ADILABAD

Class XI Physics - Autumn Break Holiday Homework

SYLLABUS: Chapter upto Gravitation

The objectives of the 10-day autumn break holiday homework are aligned with experiential and independent learning principles:

DAY-BY-DAY ACTIVITY & EXPERIENTIAL PLAN

Task 1: Units, Measurements & Errors (Day 1)

- **Activity (The Kitchen Measurement Audit):** Choose three measuring devices at home (e.g., digital kitchen scale, measuring tape, stopwatch, thermometer).
- Record their least count.
- Measure dimensions of a standard object three times, calculate the mean, and estimate percentage error due to instrument scale and human limitation.
- **Deliverable:** A crisp 1-page observation table with error calculations.

Task 2: Kinematics (Motion in a Straight Line & Plane) (Days 2-3)

- **Activity (The Smartphone Physics Lab):** Observe a vehicle moving on a straight road or a rolling ball.
- Use a stopwatch app to record time intervals for distance markers.
- For projectiles, throw a small ball or paper plane at angles (~30°, 45°, 60°) and visually note which angle yields maximum horizontal range.
- **Deliverable:** A short experiential reflection note (4-5 sentences on how air resistance affected your paper plane).

Task 3: Laws of Motion (Days 4-5)

- **Activity (Inertia & Friction Challenge):** Place a postcard over an empty glass and a coin on top.
- **Inertia Trick:** Give the card a sharp horizontal flick to watch the coin drop due to inertia of rest.
- **Frictional Coefficient:** Place a heavy book on a wooden surface/notebook and slowly tilt until it slides.
- Measure angle of inclination with a protractor app; static friction $\mu_s = tan\ \theta$.
- **Deliverable:** Snap a photo or quick video clip demonstrating the inertia trick or angle measurement for your portfolio.

Task 4: Work, Energy, and Power (Days 6-7)

- **Activity (The Staircase Power Challenge):** Measure vertical height of one step and multiply by total steps to get total height (h).
- Weigh yourself (mass m), walk up the stairs normally, and note time (t).
- Calculate mechanical power $P = mgh / t$.
- Repeat by running up the stairs and compare outputs.
- **Deliverable:** Note down data values and calculated power in watts (W) and horsepower (hp).

Task 5: System of Particles & Rotational Motion (Day 8)

- **Activity (Balancing Acts at Home):** Balance a long rigid stick or broom horizontally on index fingers of both hands.
- Move fingers slowly inward.
- Notice how your fingers automatically meet precisely at the Center of Mass regardless of where you started.
- **Deliverable:** A brief 3-bullet-point explanation of the physics behind balancing a broomstick or bicycle wheel.

Task 6: Gravitation (Days 9-10)

- **Activity (Sky Gazing & Free Fall):** Observe the Moon over two consecutive nights relative to a fixed landmark at the same time.
- Drop a flat sheet of paper and a crumpled paper ball simultaneously.
- Place flat paper on top of a heavy textbook and drop them together.
- **Deliverable:** A neatly structured single-page compilation of all task data, tables, and short conclusions to be submitted on reopening day.

ASSESSMENT & SUBMISSION GUIDELINES

1. **Format:** Compile work in a thin, eco-friendly pastel/paper notebook or loose-leaf folder. Avoid heavy plastic covers.
2. **Parental Role:** Parents are requested only to ensure safety during physical activities; all calculations and observations must be strictly student-driven.

KENDRIYA VIDYALAYA ADILABAD

Class VII Science - Autumn Break Holiday Homework

SYLLABUS : Chapter upto Adolescence

The objectives of the 10-day autumn break holiday homework for Class VII Science are aligned with experiential, activity-based, and independent learning principles:

DAY-BY-DAY ACTIVITY & EXPERIENTIAL PLAN

Task 1: The World of Science & Substances (Chapters 1 & 2)

- **Activity (Kitchen Indicator & Inquiry Audit):** Observe common household substances (lemon juice, soap solution, vinegar, salt water). Prepare a natural indicator using turmeric powder or hibiscus petals to test and classify them as acidic or basic.
- **Deliverable:** A crisp observation table showing color changes and categorization of tested substances.

Task 2: Electricity (Chapter 3)

- **Activity (Simple Circuit Assembly):** Using a small battery, wires, and a torch bulb (or LED), set up a simple closed circuit. Test different household items (eraser, iron key, plastic scale, pencil lead) to sort them into conductors and insulators.
- **Deliverable:** A short observation log listing tested materials and whether they allowed current to pass.

Task 3: Metals and Non-metals (Chapter 4)

- **Activity (Property Check at Home):** Observe common metal items (steel spoon, aluminum foil, copper wire) and non-metal items (coal piece, sulfur if available, plastic, wood). Test characteristics like appearance, malleability, and conduction.
- **Deliverable:** A neat classification table comparing selected metal and non-metal objects based on appearance and flexibility.

Task 4: Changes Around Us (Chapter 5)

- **Activity (Household Changes Audit):** Observe everyday changes around the house, such as melting ice, dissolving sugar in water, tearing paper, and burning a candle or rusting of an iron nail.
- **Deliverable:** An observation log classifying these everyday events into physical and chemical changes with brief reasons.

Task 5: Adolescence (Chapter 6)

- **Activity (Growth & Wellness Reflection):** Reflect on developmental changes during adolescence, nutritional requirements, and the importance of physical activity and personal hygiene.
- **Deliverable:** A short, structured note detailing key health practices and nutritional needs during adolescent growth.

ASSESSMENT & SUBMISSION GUIDELINES

1. **Format:** Compile work in a thin, eco-friendly paper notebook or loose-leaf folder. Avoid heavy plastic covers.
2. **Parental Role:** Parents are requested only to ensure safety during physical or kitchen activities; all observations and data recording must be strictly student-driven.

KENDRIYA VIDYALAYA ADILABAD

Class IX Science - Autumn Break Holiday Homework

The objectives of the 10-day autumn break holiday homework for Class IX Science are aligned with experiential, activity-based, and independent learning principles:

DAY-BY-DAY ACTIVITY & EXPERIENTIAL PLAN

Task 1: Matter in Our Surroundings & Is Matter Around Us Pure? (Days 1-2)

- **Activity (Kitchen Mixture & Evaporation Audit):** Observe evaporation by placing a small amount of water or damp cloth in sunlight and noting the cooling/drying time. Prepare common mixtures at home (salt solution, chalk powder in water, milk in water) and examine their clarity and filterability.
- **Deliverable:** A crisp observation table classifying home mixtures into true solutions, suspensions, and colloids.

Task 2: Motion (Days 3-4)

- **Activity (The Pacing & Motion Lab):** Measure a straight 20-meter path in your hallway or courtyard. Walk at a steady pace, then walk fast or jog, recording time values with a smartphone stopwatch. Calculate average speed and note distance-displacement differences along a curved path.
- **Deliverable:** Recorded time data, calculated speed values, and a brief reflection distinguishing distance from displacement.

Task 3: Force and Laws of Motion (Days 5-6)

- **Activity (Inertia & Friction Challenge):** Place a stiff postcard over an empty glass with a coin on top. Give the card a sharp horizontal flick to observe the coin dropping into the glass due to inertia of rest. Roll a small ball on different surfaces (carpet vs. smooth floor) to observe friction effects.
- **Deliverable:** A short description of observations regarding inertia of rest/motion and friction during household trials.

Task 4: Biology Special Assignments (Days 7-8)

- **Activities (Assigned Tasks):**
  - Prepare a three-dimensional cell model using clay, cardboard, or other reusable materials.
  - Draw diagrams of parenchyma, collenchyma, and sclerenchyma.
  - Interview a farmer or family member knowledgeable about agriculture and record three methods used to improve crop yield.
  - Observe flowers in a garden or nearby field, record their colors/shapes, identify possible agents of pollination (insects or wind), and write a short note on the importance of pollination.
- **Deliverable:** 3D cell model, tissue diagrams, agricultural interview notes, and floral observation report.

Task 5: Scientific Inquiry & Reflection (Days 9-10)

- **Critical Inquiry:** *What new scientific question arose in your mind while studying this topic?* Record your specific biological/scientific question and a brief logical hypothesis based on your observations.
- **Deliverable:** Written reflection and record of your new scientific inquiry.

ASSESSMENT & SUBMISSION GUIDELINES

1. **Format:** Compile work neatly in a single thin, eco-friendly paper notebook or loose-leaf folder. Avoid heavy plastic covers.
2. **Parental Role:** Parents are requested only to ensure safety during practical tasks; all calculations and observations must be strictly student-driven