

Materials - Unit Two Investigation 1

Activity 1

- Van de Graaff Generator
- Bunsen burner
- Thick, insulated surface to stand on

Activity 2

- Flour
- Clay
- Marble or small metal ball, or small styrofoam ball

(For Each Group)

- Two balls that are the same size and mass (two tennis balls)
- A third ball of a different mass (Golf ball)
- Basketball
- Tennis ball

Activity 3

- 6-9 large beakers (500ml or 1L)
- Hot plates (one for each large beaker)
- Protective gloves (Heat resistant)
- Ice, freezer, or cold refrigerator
- Water

(For Each Group)

- 3 small petri dishes
- 3 stopwatches
- Thermometer
- Food coloring
- Eye dropper

Activity 4

- Basketball
- Lump of clay (1lb)
- Pendulum

Materials – Unit Two Investigation 2

Activity 1

(For Each Group)

- Spring
- Toy car or marble

Activity 2

(For Each Group)

- 2 magnets
- Spring

Activity 3

(For Each Group)

- 2 springs of different strengths
- 4 magnets of different strengths (2 strong, 2 weak)
- Paper clip or other small metal object

Activity 4

(For Each Group)

- New pencil with a flat eraser at the end

Materials – Unit Two Investigation 3

Activity 1

- Bunsen burner
- Wooden sticks
- Match or lighter
- Six test tubes with stoppers for gas collection
- Large beaker or bowl
- 1-2L of tap water
- Three large test tubes and stoppers with a hole for a gas tube
- Solid CaCO_3
- 5M HCL
- granulated ZN
- MgSO_4 (Epsom salt)
- Solid KMnO_4

(For whole class electrolysis with Hoffman Apparatus)

- Hofman tube
- Column Stand
- 2 electrodes
- 1L of 1M Sodium Sulfate
- DC power supply with clip leads
- Ruler
- 2 test tubes marked X and Y
- Wooden splint
- Matches or lighter
- Candle

(For Each Group)

- Clear plastic cup
- 2 metal thumbtacks (no paint)
- 9 volt battery
- Distilled water
- Large beaker or bowl
- Tap water
- Two 10ml Pyrex graduated test tubes
- Two small pieces of paper
- Wooden sticks (splint)
- Lighter or match

Activity 2

- Rod
- Fur
- Two balloons

Activity 3 - NONE

Activity 4

- 2 billiard balls (or other balls that make a sound on)

Materials – Unit Two Investigation 4

Activity 1

(For whole class demonstration)

- Balloon filled with air
- Balloon (size of orange) filled with hydrogen and oxygen
- Small candle
- Long stick or pole
- Hydrogen gas (tank or from a reaction)
- Oxygen gas (tank or from a reaction)
- Matches
- Earplugs or earmuffs

Activity 2

(For whole class demonstration)

- Steel wool
- Vinegar
- 50ml beaker or small bowl
- 250ML flask X 2
- Scale

(For Each Group)

- Copper (II) chloride (CuCl_2)
- Beaker
- Aluminum (Al)
- Water
- Scoop
- Funnel
- Filter paper
- Erlenmeyer flask
- Evaporation dish (any container with short walls)

Activity 3

- 500ml beaker
- Hot plate

(For Each Group)

- Test tube X2
- Plastic cup or beaker X 2
- Cool water
- Warm water
- Hydrogen peroxide (3% H_2O_2)

Activity 4 - NONE

