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NSES CURRICULUM: ELEMENTARY SCHOOL SCIENCE

Eureka.in 3DS Content List

Designmate (I) PVT LTD

Horizon, Swati Society Road,

Darpan Circle, Ahmedabad – 380014

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CATEGORY	TOTAL TOPIC	TOTAL DURATION
Science as Inquiry Standard	10	00.40.46
Physical Science	93	04.42.18
Life Science	64	02.34.50
Earth and Space Science	74	04.16.34
Science and Technology	10	00.31.26
Science in Personal and Social Perspectives Standard	29	01.49.56
Add-On Category	27	01.24.24
TOTAL	307	16.00.14

SUBCATEGORY	TOTAL TOPIC	TOTAL DURATION
Science as Inquiry Standard	10	00.40.46
Understandings about scientific inquiry	10	00.40.46
Physical Science	93	04.42.18
Properties of objects and materials	42	01.46.07
Position and motion of objects	15	00.44.22
Light, heat, electricity, and magnetism	36	02.11.49
Life Science	64	02.34.50
The characteristics of organisms	51	01.50.24
Life cycles of organisms	4	00.12.23
Organisms and environments	9	00.32.03
Earth and Space Science	74	04.16.34
Properties of earth materials	26	01.40.25
Objects in the sky	13	00.38.20
Changes in earth and sky	35	01.57.49

SUBCATEGORY	TOTAL TOPIC	TOTAL DURATION
Science and Technology	10	00.31.26
Understanding about science and technology	9	00.31.26
Abilities to distinguish between natural objects and objects made by humans	1	00.00.00
Science in Personal and Social Perspectives Standard	29	01.49.56
Personal health	16	01.01.50
Types of Resources	3	00.12.33
Changes in Environments	7	00.25.20
Science and Technology in Local Challenges	3	00.10.13
Add-On Category	27	01.24.24
Matter and its Properties	2	00.02.46
The Living World	21	01.11.57
Mechanics	4	00.09.41
TOTAL TOPICS	307	16.00.14

Science as Inquiry Standard

Topic Name	Duration	Sim	Int
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Understandings about scientific inquiry

- **Core Topics**

1. Measurement of Length (Part-1)	00.03.26		
2. Measurement of Length (Part-2)	00.04.06		
3. Range of length	00.06.09		
4. Measuring instruments	00.00.00	√	
5. Hydrometer	00.03.41		
6. Bimetallic Thermometer	00.02.28		√
7. Types of Thermometers (Maximum Thermometer)	00.07.43		
8. Types of Thermometer (Minimum Thermometer)	00.02.43		
9. Types of Thermometer (Combined Maximum-Minimum Thermometer)	00.04.37		
10. Lenses	00.05.53	√	

TOTAL TOPICS IN SCIENCE AS INQUIRY STANDARD – 10	00.40.46		
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Physical Science

Topic Name	Duration	Sim	Int
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Properties of objects and materials

- **Core Topics**

1. Colours and Shapes	00.00.00	√
2. Physical Characteristics of Different Objects	00.00.00	√
3. Distinguishing a Physical Change from a Chemical Change	00.03.14	
4. Temperature Units and their Inter-conversion	00.04.14	√
5. Properties and Uses of Plastics	00.02.58	
6. Measurement of Length (Part-1)	00.03.26	
7. Measurement of Length (Part-2)	00.04.06	
8. Measuring instruments	00.00.00	√
9. Volume	00.02.22	
10. Volume Determination of Solids	00.03.23	
11. Volume of an Irregular Object (Part-1)	00.03.48	√
12. Volume of Liquids	00.02.50	
13. Density (Part-1)	00.05.09	√
14. Determining Density of a Solid	00.00.00	√
15. Hydrometer	00.03.41	
16. Heat and Temperature: The Concept	00.06.55	
17. Types of Thermometers (Maximum	00.07.43	

Physical Science

Topic Name	Duration	Sim	Int
Thermometer)			
18. Types of Thermometer (Minimum Thermometer)	00.02.43		
19. Types of Thermometer (Combined Maximum-Minimum Thermometer)	00.04.37		
20. Measuring Weight	00.00.00	√	
21. Floating and Sinking	00.03.51	√	
22. Separation of Mixtures using Sublimation	00.01.52		
23. Separation of Soluble Components from a Mixture	00.02.45		
24. Separation of a Mixture	00.00.00	√	
25. Physical Nature of Matter	00.02.19		
26. Molecular Arrangement in Three States of Matter	00.03.15		
27. Molecular Arrangement in Gases	00.03.13		
28. Molecular Arrangement in Liquids	00.02.53		
29. Molecular Arrangement in Solids	00.02.53		
30. The Three States of Matter	00.02.44		
31. The Three Phases of Water	00.02.47		
32. States of Matter (Part-II)	00.02.45	√	
33. Kinetic Theory of Matter-1 (SOLID)	00.05.27		
34. Condensation	00.00.00	√	
35. Evaporation	00.00.00	√	
36. Shape of Water	00.00.00	√	

Physical Science

Topic Name	Duration	Sim	Int
37. Matter and its Properties	00.02.46		
• Suggested Topics			
1. Screw Gauge	00.05.28		
2. Measurement of Length using a Vernier Calliper	00.00.00	√	√
3. Measurement of Volume of a Hollow Cylinder using a Vernier Calliper	00.00.00	√	√
4. Measurement of the thickness of a given sheet using a screw gauge	00.00.00	√	
5. Measurement of Diameter of a Given Wire Using a Screw Gauge	00.00.00	√	

Position and motion of objects

- **Core Topics**

1. Force: A Push or a Pull	00.02.22		
2. Forces and Motion	00.05.17		
3. Gravity	00.02.34		
4. Position, Distance, and Displacement	00.00.00	√	
5. Contact and non-contact force	00.03.22		
6. Graph (Introduction)	00.02.28		
7. Measurement of speed	00.00.00	√	
8. Effects of Force	00.03.07		
9. Types of Force (Part-1)	00.02.51		

Physical Science

Topic Name	Duration	Sim	Int
10. Types of Force (Part-2)	00.02.12		
11. Sound and Hearing	00.04.48		
12. Loud and Soft Sound	00.03.12		
13. Transmission of Sound	00.05.29	√	
14. Sound	00.03.53		
15. Propagation of Sound Waves through Different Media	00.02.47	√	

Light, heat, electricity, and magnetism

- **Core Topics**

1. Light	00.04.28		√
2. Transparent, Translucent, and Opaque Objects	00.03.51		
3. Light and Shadow	00.03.32		
4. Mirror and Reflection	00.02.43		
5. Reflection of Light and its Laws	00.05.07	√	
6. Curved Mirrors	00.03.24	√	
7. Lenses	00.05.53	√	
8. Image Formation in a Convex Lens	00.04.59	√	
9. Periscope	00.05.43		
10. Colour of Objects	00.05.20	√	
11. Thermal Conductors and Insulators	00.02.19		

Physical Science

Topic Name	Duration	Sim	Int
12. Heat Energy	00.03.50		
13. Transfer of Heat (Conduction)	00.04.41	√	
14. Experiment to show that air is required for burning.	00.00.00	√	
15. Electricity Around us	00.05.15		
16. Electric Current	00.05.40		
17. Electric Cell	00.02.30		
18. Electric Switch	00.02.07		
19. Bulb Connected to a Cell	00.03.35	√	
20. Electric Components and Symbols	00.00.00	√	
21. Connections in a Simple Electric Circuit	00.00.00	√	
22. Direct and Alternating Current	00.07.13	√	
23. Electromagnet	00.02.48		√
24. Electromagnet (Strength of its Magnetic Field)	00.04.11		
25. Magnetic field of an electromagnet	00.00.00	√	
26. Electric Bell	00.03.30	√	√
27. Magnetic Field due to a Straight Wire Carrying Current (Part-1)	00.06.02	√	
28. Magnetic Field due to a Straight Wire Carrying Current (Part-2)	00.04.28	√	
29. Magnets	00.06.21		
30. What is a magnet?	00.05.52		
31. Attraction and Repulsion between Magnets	00.03.23		

Physical Science

Topic Name	Duration	Sim	Int
32. Make Your Own Magnet	00.03.45		
33. Magnetic and Non-Magnetic Materials	00.04.22		
34. Magnetic Properties of Iron and Steel	00.01.15		
35. Treasure Hunt using Magnetic Compass	00.00.00	√	
36. Demagnetization	00.03.42		
TOTAL TOPICS IN PHYSICAL SCIENCE – 93	04.42.18		

Life Science

Topic Name	Duration	Sim	Int
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The characteristics of organisms

- **Core Topics**

1. What is a Habitat	00.05.43		
2. Living and Non-living Things	00.00.00	√	
3. Living Things	00.02.50		
4. Adaptation in Animals	00.00.00	√	
5. Different Nests	00.00.00	√	
6. What is an ecosystem?	00.07.24		
7. Domestic animals and their living places	00.00.00	√	
8. Wild animals and their abodes	00.00.00	√	
9. Desert and coast- A comparison	00.05.29		
10. Parts of Animal	00.00.00	√	
11. Types of Animals	00.00.00	√	
12. Parts of Plants	00.00.00		√
13. Functions of our Body Parts	00.02.24	√	
14. Leaves of Plants	00.07.51		
15. Test for starch	00.00.00	√	
16. Primary Functions of Roots	00.04.23		
17. How plants transport water	00.04.53		
18. Preparation and Transportation of food in plants	00.02.43		

Life Science

Topic Name	Duration	Sim	Int
19. Plants gives us food	00.00.00	√	
20. The Beautiful Flower	00.02.22		
21. Heart - an amazing pump	00.02.43		
22. Kidney - The Body Filters	00.02.29		
23. Brain - The Human Computer	00.02.11		
24. Muscular System	00.02.24		
25. Digestive System	00.02.57		
26. Incredible Human Machine (I)	00.02.53		
27. Bones and Muscles	00.03.13	√	
28. The Skeletal System and its Functions	00.03.50		
29. Joints and muscles	00.05.10		
30. Limbs	00.04.20		
31. The Human Digestive System	00.03.31		
32. The Human Eye	00.00.00	√	
33. The Human Ear	00.00.00		√
34. Body system (Digestive)	00.00.00		√
35. Body system (Respiratory)	00.00.00	√	
36. Body system-urinary	00.00.00		√
37. Body system-Nervous	00.00.00		√
38. The human nervous system	00.03.34		
39. Organs of the human body	00.00.00		√
40. Sense Organs	00.02.26		
41. Types of Plants	00.00.00	√	

Life Science

Topic Name	Duration	Sim	Int
42. Types of Root	00.00.00	√	
43. Different seeds	00.00.00	√	
44. Stems	00.00.00	√	
45. Insects	00.00.00	√	
46. Anchoring function of plant root	00.00.00	√	
• Suggested Topics			
1. Plants - Germination and Uses	00.07.42	√	
2. Vertebrates and invertebrates	00.07.53		
3. Vegetable Market	00.04.18		
4. What am I?	00.00.00	√	
5. Locomotion in animals	00.02.48		

Life cycles of organisms

• Core Topics			
1. Life Cycle of a Butterfly	00.04.40		
2. Pollination and Fertilization	00.05.18		
• Suggested Topics			
1. Life cycle of frog	00.02.25	√	
2. Life cycle of silk moth	00.00.00	√	

Life Science

Topic Name	Duration	Sim	Int
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Organisms and environments

- **Core Topics**

1. Food Chain	00.03.59		
2. The Food Web	00.05.55		
3. What is an ecosystem?	00.07.24		
4. Adaptation in Animals	00.00.00	√	
5. What is a Habitat	00.05.43		
6. Greenhouse Effect	00.00.00	√	
7. Recycling Waste	00.04.12	√	
8. Save Water	00.00.00	√	
9. How energy impacts environment	00.04.50		

TOTAL TOPIC IN LIFE SCIENCE – 64	02.34.50		
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Earth and Space Science

Topic Name	Duration	Sim	Int
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Properties of earth materials

- **Core Topics**

1. Rock Cycle	00.03.57		
2. Groundwater	00.00.00	√	
3. Layers of the Earth's Atmosphere	00.06.00	√	
4. Importance of Forests	00.04.47		
5. Clastic Sedimentary Rocks	00.04.44		
6. Chemical and Organic Sedimentary Rocks	00.06.09		
7. Igneous Rocks	00.04.05		
8. Metamorphic Rocks	00.03.08		
9. What are Rocks ?	00.03.27		
10. The Surface of the Earth	00.03.01		
11. Uses of Rocks and Minerals	00.04.52		
12. Properties of Soil and its Uses	00.05.41		
13. Soil Horizons	00.05.17		
14. Composition of Soil	00.04.38		
15. Loam	00.03.57		
16. Sandy Soil	00.03.43		
17. Clay Soil	00.04.40		
18. Silt Soil	00.03.46		

Earth and Space Science

Topic Name	Duration	Sim	Int
19. Causes of Soil Damage and its Conservation	00.06.55		
20. Determine the presence of air in water and soil	00.00.00	√	
21. Soil Testing (Water Holding Capacity)	00.00.00	√	
22. Importance of Soil and its Formation	00.04.44		
23. Fossils	00.06.34		
24. A trip to the Dino world	00.00.00	√	
• Suggested Topics			
1. Identifying Minerals	00.06.20		
2. Renewable and Non renewable sources of Energy	00.00.00		√

Objects in the sky

• Core Topics			
1. Day and Night Cycle	00.03.08		
2. Comet	00.00.00	√	
3. Eclipse	00.00.00	√	
4. Formation and Types of Clouds	00.04.12	√	
5. The Moon	00.03.19		
6. The Sun in the Sky	00.03.19		

Earth and Space Science

Topic Name	Duration	Sim	Int
7. Phases of the Moon	00.00.00	√	
8. The Sun (Part-1)	00.05.15		√
9. The Sun (Part-2)	00.05.25		√
10. Asteroids	00.03.26		
11. Space Exploration	00.00.00	√	
12. Colours of the Rainbow	00.04.40		
13. Solar Energy	00.05.36		

Changes in earth and sky

• Core Topics

1. Chemical Weathering	00.03.42		
2. Earthquake	00.04.12		
3. Erosion	00.03.15		
4. Biological Weathering	00.03.11		
5. Physical Weathering	00.03.14		
6. What must you do during an Earthquake?	00.01.45		
7. Fold and Fault-Block Mountains	00.03.41		
8. Hotspot Volcanism (Formation of the Hawaiian Islands)	00.03.40		
9. What Damages the Habitat?	00.05.14		
10. Water Cycle	00.02.36		
11. Water cycle - Condensation	00.00.00	√	

Earth and Space Science

Topic Name	Duration	Sim	Int
12. Water cycle - Evaporation	00.00.00	√	
13. Water cycle - Precipitation and Surface runoff	00.00.00	√	
14. The formation of rain-The water cycle	00.00.00	√	
15. What is Weather?	00.05.56	√	
16. Climate Change	00.05.20		
17. Fronts and Weather Conditions	00.05.11		
18. Air Masses	00.04.27		
19. What is Climate?	00.05.37		
20. What Influences Climate?	00.04.47		
21. Types of Thermometers (Maximum Thermometer)	00.07.43		
22. Types of Thermometer (Minimum Thermometer)	00.02.43		
23. Types of Thermometer (Combined Maximum-Minimum Thermometer)	00.04.37		
24. Temperature of the Earth	00.04.22		
25. Air and us	00.03.10		
26. The Air around us	00.03.29		
27. Composition and Importance of Air	00.04.26		
28. Wind	00.03.52		
29. Types of Weather	00.00.00	√	
30. Seasons	00.04.14		
31. Lunar Phases	00.05.17		

Earth and Space Science

Topic Name	Duration	Sim	Int
32. Eclipse	00.00.00	√	
33. Phases of the Moon	00.00.00	√	
34. Solar System	00.06.12		
• Suggested Topics			
1. Sea Breeze and Land Breeze	00.01.56		
TOTAL TOPICS IN EARTH AND SPACE SCIENCE – 74	04.16.34		

Science and Technology

Topic Name	Duration	Sim	Int
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Understanding about science and technology

- **Core Topics**

1. Technology-Changing lives	00.06.30		
2. Inclined Plane	00.02.52		
3. Wheel and Axle	00.02.33		
4. Lever	00.03.02	√	
5. Pulley	00.03.45		
6. Wedges and Screws	00.03.11	√	

- **Suggested Topics**

1. Principle of the Lever	00.00.00	√	
2. Classes of Levers	00.04.15		
3. Gears	00.05.18		

Abilities to distinguish between natural objects and objects made by humans

- **Core Topics**

1. Natural and Manmade Things	00.00.00	√	
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TOTAL TOPICS IN SCIENCE AND TECHNOLOGY – 10	00.31.26		
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Science in Personal and Social Perspectives Standard

Topic Name	Duration	Sim	Int
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Personal health

- **Core Topics**

1.	Better Safe than Sorry	00.04.49	
2.	Taking Care of your Teeth	00.05.41	√
3.	Germs and Diseases	00.04.27	
4.	How Germs enter the Human Body	00.06.42	
5.	Microorganisms – Friends or Foe?	00.06.00	
6.	Must we exercise?	00.03.19	
7.	Good Health	00.01.51	
8.	Good Food Habits	00.04.57	
9.	Food for Health	00.02.58	
10.	Food and Growth	00.03.08	
11.	Passive smoking and bronchitis	00.02.31	

- **Suggested Topics**

1.	Discipline in your Daily Life	00.02.19	
2.	Rules for Safety and Behavior	00.04.12	
3.	First-aid for fracture and sprain	00.03.40	
4.	Oral care	00.01.46	√ √
5.	Microbes - Tiny but Deadly	00.03.30	

Science in Personal and Social Perspectives Standard

Topic Name	Duration	Sim	Int
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Types of Resources

- **Core Topics**

1. What are minerals?	00.04.01		
2. Recycling Waste	00.04.12	√	
3. Rubbish and Litter	00.04.20		

Changes in Environments

- **Core Topics**

1. Saving Energy and the Environment	00.05.48		
2. Improving our School Environment	00.03.37		
3. Adaptation in Animals	00.00.00	√	
4. Noise Pollution	00.04.59		
5. Photochemical smog	00.03.44		
6. How energy impacts environment	00.04.50		
7. A River's Tale	00.02.22		

Science in Personal and Social Perspectives Standard

Topic Name	Duration	Sim	Int
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Science and Technology in Local Challenges

- **Core Topics**

1. Satellites	00.03.37
2. Means of transport	00.03.37
3. People and occupations	00.02.59

TOTAL TOPICS IN SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES STANDARD – 01.49.56
29

Add-On Category

Topic Name	Duration	Sim	Int
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Matter and its Properties

1. Shape of Water	00.00.00	√	
2. Matter and its Properties	00.02.46		

The Living World

1. The Living Cell	00.04.46		
2. World of cells	00.02.28		
3. Incredible Human Machine (I)	00.02.53		
4. Incredible Human Machine (II)	00.02.23		
5. Brain - The Human Computer	00.02.11		
6. Neurons	00.01.52		
7. Heart - an amazing pump	00.02.43		
8. Respiration (Breathing)	00.03.37		
9. Digestive System	00.02.57		
10. Muscular System	00.02.24		
11. Kidney - The Body Filters	00.02.29		
12. Attacking the invaders	00.02.32		
13. Plant	00.02.38		
14. The Beautiful Flower	00.02.22		
15. Why do we need trees?	00.04.46		
16. Let them Bloom	00.04.21		
17. Going to School	00.05.44		

Add-On Category

Topic Name	Duration	Sim	Int
18. Farming	00.07.17		
19. Dispersal of Seeds by Wind and Water	00.04.19		
20. Dispersal of Seeds by Animals and by Explosive Mechanism	00.04.13		
21. The Human Ribs	00.03.02		

Mechanics

1. Simple Machines (Part - 2)	00.03.22		
2. Lever	00.03.19		
3. Potential energy associated with an inclined plane	00.00.00	√	
4. Mechanical Advantage of a Gear	00.03.00		

TOTAL TOPICS IN ADD-ON CATEGORY – 27 01.24.24

TOTAL TOPICS IN ELEMENTARY SCHOOL SCIENCE – 307 16.00.14

*Sim = Simulation

*Int = Interactive