

DESIGN & TECHNOLOGY - SCHEMES OF WORK

For Children Aged 8 to 12

Design & Technology Lessons Structure

Time – Approx. 90 minutes

1. Remind class of last topic area explored and relate to current topic.
2. Discuss and explore with concrete and abstract examples new topic.
3. Design Overview – where appropriate and necessary.
4. Individual Design Work.
5. Group Work – Set small groups an area to explore.
6. Practical Application – discuss how topic area is applied in every life.
7. Making Connections – discuss and explore connections between topic and other topic areas and subjects.
8. Media – use video clips and programmes and/or computer programmes and websites where appropriate.
9. Record through text and illustrations where appropriate. Pupils under 10 to copy teacher's whiteboard recording. Pupils above 10 to record using their own words.
10. Plenary & Quiz

Resources

1. Design & Technology Books
2. Internet
3. Cooking Equipment
4. Recipes
5. Electronics Kit
6. Electroscopes
7. Magnets Kit
8. Robots 1 & 2 – Inventors Handbook Kit
9. Sound Kit
10. Sensors & Detectors
11. Camera Obscura
12. Miscellaneous Electrical Appliances
13. Miscellaneous Materials
14. Wood
15. Woodwork Tools
16. Textiles
17. Haberdashery
18. Games
19. Craft Materials
20. Newspapers, Magazines & Catalogues
21. Field Trips
22. Apple Mac
23. PC Windows
24. Computer Programmes

Design & Technology Subject Areas

1. Practical Design
2. Imaginative Design
3. Practical Technology
4. Imaginative Technology
5. Inventions & Inventors

YEAR 4

Autumn Term

1. PRACTICAL DESIGN

1. Food & Drinks

- a. Salads
- b. Soups
- c. Pastry

2. Storage Items

- a. Boxes
- b. Bags & Purses
- c. CD / DVD Holders

Spring Term

3. Games & Toys

- a. Outdoor Games
- b. Soft Toys Design & Making

Summer Term

4. Art & Textiles

- a. Rag Rug Patch Design & Making
- b. Scenery for School Plays

YEAR 5

Autumn Term

1. PRACTICAL DESIGN

5. Food & Drinks

- a. Cultural Meals

6. Storage Items

- a. Spice Racks etc...

7. Games & Toys

- a. Board Games

8. Art & Textiles

- a. Egg Balloon Mask Design & Making

9. Moving Objects

- a. Puppets

2. IMAGINATIVE DESIGN

10. Buildings

- a. Houses
 - i. Eco-Houses
 - ii. Artistic Houses
 - iii. Block Of Flats
 - iv. Garden Houses
- b. Large Buildings
 - i. Angular Buildings
 - ii. Curved Buildings

3. PRACTICAL TECHNOLOGY

11. Computer Work

- a. Introduction & Overview
- b. Files & Documents
- c. Computer Programmes
- d. Using Microsoft Word
- e. Using Microsoft Excel

4. IMAGINATIVE TECHNOLOGY

12. How Things Work

- a. Mechanics of Motion
 - i. The Wheel & Axle
 - ii. Gears & Belts
 - iii. Cams & Cranks

5. INVENTIONS & INVENTORS

13. Timeline of the Major Inventions

14. Inventors

- a. The Mesopotamians

Spring Term

1. PRACTICAL DESIGN

15. Food & Drinks

- a. Desserts

16. Storage Items

- a. Coat Peg Lines

17. Games & Toys

- a. Outdoor Games

18. Art & Textiles

- a. Paper Mache Mask Design & Making

2. IMAGINATIVE DESIGN

19. Clothing

- a. Everyday Clothes

3. PRACTICAL TECHNOLOGY

20. Computer Work

- a. Files & Documents
- b. Computer Programmes
- c. Using Microsoft Word
- d. Using Microsoft Excel
- e. Using Microsoft Powerpoint
- f. Using iTunes
- g. Using IPhoto
- h. Using Corel Photo-Paint & Draw

4. IMAGINATIVE TECHNOLOGY

21. How Things Work

- a. Mechanics of Motion
 - i. Pulleys
 - ii. Screws
 - iii. Springs

5. INVENTIONS & INVENTORS

22. Inventors

- a. Leonardo DaVinci

Summer Term

1. PRACTICAL DESIGN

- 23. Food & Drinks
 - a. Fruit Drinks
- 24. Storage Items
 - a. Cylinder Holders
- 25. Games & Toys
 - a. Soft Toys Design & Making
- 26. Art & Textiles
 - a. Scenery for School Plays

2. IMAGINATIVE DESIGN

- 27. Furniture
 - a. Chairs
 - b. Sofas

3. PRACTICAL TECHNOLOGY

- 28. Computer Work
 - a. Using Microsoft Word
 - b. Using Microsoft Excel
 - c. Using Microsoft Powerpoint
 - d. Using iTunes
 - e. Using IPhoto
 - f. Using Corel Photo-Paint & Draw
 - g. Using Google Earth
 - h. Email
 - i. Writing Emails
 - ii. Sending Emails
 - i. Using the Internet
 - i. Browsing Web Pages
 - ii. Searching

4. IMAGINATIVE TECHNOLOGY

29. Designing Technology
- a. Electrical Equipment
 - i. Televisions
 - ii. Entertainment Centres

5. INVENTIONS & INVENTORS

30. Inventors
- a. Galileo Galilei

YEAR 6

Autumn Term

1. PRACTICAL DESIGN

31. Art & Textiles
- a. Lino Design & Printing
32. Moving Objects
- a. Objects with Wheels

2. IMAGINATIVE DESIGN

33. Clothing
- a. Fashion Clothes

3. PRACTICAL TECHNOLOGY

34. Electrical Circuit Devices
35. Lamps

36. Computer Work
- a. Using Microsoft Word
 - b. Using Microsoft Excel
 - c. Using Microsoft Powerpoint
 - d. Using ITunes
 - e. Using IPhoto
 - f. Using IMovie
 - g. Using GarageBand
 - h. Using Corel Photo-Paint & Draw
 - i. Using Google Earth
 - j. Email
 - i. Writing Emails
 - ii. Sending Emails
 - k. Using the Internet
 - i. Searching
 - ii. Downloading

4. IMAGINATIVE TECHNOLOGY

37. How Things Work

- a. Electricity & Automation
 - i. Electricity
 - ii. Magnetism
 - iii. Sensors & Detectors

38. Designing Technology

- a. Electrical Equipment
 - i. Mobile Phones / iPods / Cameras
 - ii. Kitchen Appliances

5. INVENTIONS & INVENTORS

39. Timeline of the Major Inventions

40. Inventors

- a. Benjamin Franklin
- b. Michael Faraday

Spring Term

1. PRACTICAL DESIGN

41. Art & Textiles

- a. School Fun Day Advertisement Boards

2. IMAGINATIVE DESIGN

42. Buildings

- a. Large Buildings
 - i. Gothic Buildings
 - ii. Classical Buildings
 - iii. Modernist Buildings
 - iv. Futuristic Buildings

3. PRACTICAL TECHNOLOGY

43. Web Sites / Pages

- a. Using Dreamweaver
- b. Using IWeb
- c. Designing a Template
- d. Designing a Web Page
- e. Publishing a Web Page / Site

44. Computer Work

- a. Using Microsoft Word
- b. Using Microsoft Excel
- c. Using Microsoft Powerpoint
- d. Using iTunes
- e. Using IPhoto
- f. Using IMovie
- g. Using GarageBand
- h. Using Corel Photo-Paint & Draw
- i. Using Google Earth
- j. Email
 - i. Writing Emails
 - ii. Sending Emails
- k. Using the Internet
 - i. Searching
 - ii. Downloading

4. IMAGINATIVE TECHNOLOGY

- 45. Designing Technology
 - a. Vehicles
 - i. Eco-Vehicles
 - ii. Fast Cars

5. INVENTIONS & INVENTORS

- 46. Timeline of the Major Inventions
- 47. Inventors
 - a. Alexander Graham Bell

Summer Term

1. PRACTICAL DESIGN

- 48. Art & Textiles
 - a. Scenery for School Plays

2. IMAGINATIVE DESIGN

- 49. Furniture
 - a. Tables
 - b. Cabinets
- 50. Interior Design
 - a. Lounge
 - b. Kitchen
 - c. Dining Room
 - d. Study

3. PRACTICAL TECHNOLOGY

51. Web Sites / Pages

- a. Using Dreamweaver
- b. Using IWeb
- c. Designing a Template
- d. Designing a Web Page
- e. Publishing a Web Page / Site

52. Computer Work

- a. Using Microsoft Word
- b. Using Microsoft Excel
- c. Using Microsoft Powerpoint
- d. Using iTunes
- e. Using IPhoto
- f. Using IMovie
- g. Using GarageBand
- h. Using Corel Photo-Paint & Draw
- i. Using Google Earth
- j. Email
 - i. Writing Emails
 - ii. Sending Emails
- k. Using the Internet
 - i. Searching
 - ii. Downloading

4. IMAGINATIVE TECHNOLOGY

53. How Things Work

- a. Harnessing the Elements
 - i. Floating
 - ii. Flying
 - iii. Pressure Power
 - iv. Using Heat

5. INVENTIONS & INVENTORS

54. Timeline of the Major Inventions

55. Inventors

- a. Thomas Edison

YEAR 7

Autumn Term

1. PRACTICAL DESIGN

56. Food & Drinks

- a. Cultural Meals

57. Art & Textiles

- a. Lino Design & Printing

2. IMAGINATIVE DESIGN

58. Clothing

- a. Gadget Clothes

3. PRACTICAL TECHNOLOGY

59. Robots

60. Web Sites / Pages

- a. Using Dreamweaver
- b. Using IWeb
- c. Designing a Template
- d. Designing a Web Page
- e. Publishing a Web Page / Site

61. Computer Work

- a. Using Microsoft Word
- b. Using Microsoft Excel
- c. Using Microsoft Powerpoint
- d. Using iTunes
- e. Using IPhoto
- f. Using IMovie
- g. Using GarageBand
- h. Using Corel Photo-Paint & Draw
- i. Using Google Earth
- j. Email

- i. Writing Emails
- ii. Sending Emails
- k. Using the Internet
 - i. Searching
 - ii. Downloading

4. IMAGINATIVE TECHNOLOGY

62. Designing Technology

- a. Vehicles
 - i. Trains
 - ii. Planes

5. INVENTIONS & INVENTORS

63. Timeline of the Major Inventions

64. Inventors

- a. Nikolai Telsa

Spring Term

1. PRACTICAL DESIGN

65. Food & Drinks

- a. Fruit Drinks

66. Games & Toys

- a. Board Games

2. IMAGINATIVE DESIGN

67. Furniture

- a. Beds
- b. Bathroom Items

3. PRACTICAL TECHNOLOGY

68. Radios
69. Web Sites / Pages
- a. Using Dreamweaver
 - b. Using IWeb
 - c. Designing a Template
 - d. Designing a Web Page
 - e. Publishing a Web Page / Site
70. Computer Work
- a. Using Microsoft Word
 - b. Using Microsoft Excel
 - c. Using Microsoft Powerpoint
 - d. Using iTunes
 - e. Using IPhoto
 - f. Using IMovie
 - g. Using GarageBand
 - h. Using Corel Photo-Paint & Draw
 - i. Using Google Earth
 - j. Email
 - i. Writing Emails
 - ii. Sending Emails
 - k. Using the Internet
 - i. Searching
 - ii. Downloading

4. IMAGINATIVE TECHNOLOGY

71. Designing Technology
- a. Electrical Equipment
 - i. Futuristic Gadgets

5. INVENTIONS & INVENTORS

72. Timeline of the Major Inventions
73. Inventors
- a. The Wright Brothers

Summer Term

1. PRACTICAL DESIGN

74. Art & Textiles
- a. Scenery for School Plays
75. Moving Objects
- a. Spring Based Mechanisms

2. IMAGINATIVE DESIGN

76. Interior Design
- a. Bedroom
 - b. Bathroom

3. PRACTICAL TECHNOLOGY

77. Web Sites / Pages
- a. Using Dreamweaver
 - b. Using IWeb
 - c. Designing a Template
 - d. Designing a Web Page
 - e. Publishing a Web Page / Site
78. Computer Work
- a. Using Microsoft Word
 - b. Using Microsoft Excel
 - c. Using Microsoft Powerpoint
 - d. Using iTunes
 - e. Using IPhoto
 - f. Using IMovie
 - g. Using GarageBand
 - h. Using Corel Photo-Paint & Draw
 - i. Using Google Earth
 - j. Email
 - i. Writing Emails
 - ii. Sending Emails
 - k. Using the Internet

- i. Searching
- ii. Downloading

4. IMAGINATIVE TECHNOLOGY

79. How Things Work

- a. Waves
 - i. Light & Images
 - ii. Photography
 - iii. Printing
 - iv. Sound & Music
 - v. Telecommunications

5. INVENTIONS & INVENTORS

80. Timeline of the Major Inventions

81. Inventors

- a. Alexander Fleming
- b. Marie Curie