**PROGRAMMA LINGUA INGLESE CLASSE 5CO1**

Testo Adottato: From the ground up Construction AAVV Eli Edizioni

**MODULO 4 SURVEYING AND DESIGN**

Measuring and design instruments:

mapping, photogrammetry, surveying, new surveying instruments, sketch stage and working drawings, cad, rendering

Planning and reporting:

architectural brief, architectural drawing, a floor plan, architectural report, building report.

**MODULO 5 BUILDING AND SAFETY**

Types of houses

British houses, American houses, a brief hostory of skyscrapers, Italian houses.

Building elements

Foundations, walls, floors, stairs, roofs, thatching

On the building site

modern methods of construction, construction machinery, restoration, building renovation, health and safety, what to wear on the building site

**MODULO 6 BUILDING INSTALLATIONS**

House systems

plumbing systems, waste disposal systems, electrical systems, heating systems, solar heating,ventilation, air conditioning, energy conservation

Home automation

domotics: intelligent technology, how do home automation systems work?, smart applications, smart systems

Case study: home robots

**MODULO 7 URBANISATION**

Urban growth

an overview, land use and economy, urban land-use patterns, consequences of urban growth

Urban planning

a definition of planning, Greek and Roman towns, contemporary urban planning, master plan

**MODULO 8 BUILDING PUBLIC WORKS**

Engeneering

civil engineering, earthquake engineering, anti-sismic technology, reconstruction and rehabilitation

Public works

roads, bridges, tunnels, dams, gardens and parks

Case study. Museums and libraries

**MODULO 9 WORKING IN CONSTRUCTION**

professionals

types of professional figures, operatives,building and quantity surveyors, structural engineers, civil engineers, domestic energy assessors, coordinators for safety and health matters

how to find a job

CV and covering letter

**BUILDING CULTURE**

a short history of architecture

prehistoric architecture, egyptian pyramids, Greek architecture, Roman architecture, Roman heritage in Britain, Paleo-Christian architecture, romanesque architecture, gothic architecture, half-timbered houses in the UK, half-timbered houses in the USA, Renaissance and Classicism, Baroque, Georgian architecture, Gothic revival and Neoclassicism

Il docente I rappresentanti di classe

**DOMANDE MODULO 4**

1- what kind of information do physical, political and thematic maps offer?

2- how can you use photogrammetry?

3- give a definition of surveying and state its importance

4- state the traditional surveying instruments

5- state the new surveying instruments

6-define the sequence of stages you have to follow when designing a project (sketch, working drawings, cad and rendering)

7- what are the information you have to include in an architectural brief?

8- what are the information you have to include in an architectural drawing?

9-what are the information you have to include in a floor plan?

10-what are the information you have to include in an architectural report?

11-what are the information you have to include in a building report?

**MODULO 5** 12- what are the most common British houses?

13- what are the most common American houses?

14- defne the timeline of the history of skyscrapers

15-what are the most common Italian houses?

16 -what are the main features of shallow and deep foundations?

17- what is the difference between load-bearing and non-load-bearing walls?

18-what are the most common floor covering materials?

19-what are the most common types of stairs?

20-what is the difference between cut roofs and fixed roofs?

21-what are the advantages and the disadvantages of "thatching"?

22-what are the advantages of modern methods of construction?

23-state the most common modern methods of construction?

24-define the most common construction machinery

25-what are the main types of restoration?

26-what does a building renovation include?

27-what are the main safety hazards for a working site?

28-what do you wera on a building site?

**MODULO 6** 29-define the plumbing system

30-what are the main parts in a waste disposal system?

31-what do you include in an electrical systyem?

32-what are the main heating systems?

33-define the main types of solar heating

34-why do you need ventilation in your home?

35-what are the main types of ventilation?

36-what's the function of air conditioning?

37-define the refrigeration system

38- how can you achieve energy conservation?

39- how can you design a passive solar building?

40-give a definition of domotics

41-why is the control unit important for domotics?

42-how do home automation systems work?

43-what are the main smart applications for a smart home?

44-what is the function of a smart grid?

45-what are the new range of robots for the home introduced in the CES tradeshow?

**MODULO 7** 46-give a definition of urbanisation

47-what are the main land-use patterns?

48-why do governments decide to create new cities?

49-give a definition of urban planning

50-what are the main features of Greek and Roman towns?

51- what are the main features of the Garden city movement?

52- why are urban redevelopment and sustainability important for modern planning?

53-what is a Master Plan?

54-what are the main features involved in the city living?

**MODULO 8** 55- what civil engineers do today?

56-state the different specialised sub-disciplines of civil engineering

57-what are the features of earthquake engineering?

58-how can you protect cities from earthquakes?

59-how should be built an earthquake-proof structure?

60-what can you do after an earthquake?

61-define the timeline of the building of a road

62-why do you need a bridge?

63-what are the main types of bridge?

64-why do you need a tunnel?

65-how can you build a tunnel?

66-what are the main features of a dam?

67- how can you build a dam?

68- write the definition of a park

69- what do you have to take into consideration before planning a park?

70-what do you have to take into consideration before planning a museum?

71- what are the main features of the Whitney Museum of American Art?

72- what are the main features of the Jewish Museum in Berlin?

73- what are the main features of the Sainsbury Centre for Visual Arts?

74-wha are the main features of the Guggenheim Museum in Bilbao?

**MODULO 9** 75- what are the main types of professional people for the construction industry?

76- who are the working operativesin the construction industry?

77-state the differences between building and quantity surveyors

78-state the difference between strutural and civil engineers

79- what is an Energy Performance Certificate?

80-what do domestic energy assessors do?

81-what do coordinators for safety and health matters do?

82-what should be present in a safety and coordination plan?

83-prepare you CV (English and Italian version)

84- what should you write in a CV according to the Europass standardised model?

**BUILDING CULTURE** 85-what is the most famous prehistoric construction and why was it built?

86- what are the most used materials in the building of the Pyramids?

87- how were the Pyramids built?

88- define the main Greek orders?

89- what are the most common Roman buildings and give their definition?

90- what are the main features of London, Bath and the Hadrian's walls during Roman domination?

91-what are the main features of the Paleo-Christian architecture?

92- what are the main characteristics of the Romanesque architecture?

93-what are the main features of the Gothic architecture?

94- define the plan of a Gothic church

95- define the English Gothic architecture

96 what are the features of half-timbered houses in the UK?

97-what are the features of half-timbered houses in the USA?

98- who are the most important Italian artistis of the Renaissance and of the Classicism?

99- what are the features od the Baroque?

100-what are the features of the Georgian architecture?

101- define the Gothic revival and the neaclassicism