

Tutor Support Material

Assignment Briefs

The Edexcel BTEC Level 3 Subsidiary Diploma and the
Edexcel BTEC Level 3 Extended Diploma in Dental
Technology (QCF)

To support specifications for first teaching from September 2010

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Introduction

This publication supports delivery of the Edexcel Level 3 BTEC Subsidiary Diploma and the Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF). It should be read in conjunction with the published specification (publication code B024903).

All BTEC National units include an *Essential guidance for tutors* section. This brings together the unit's aim and introduction, learning outcomes, content and grading grid, providing an overview of how the unit may be delivered and assessed.

The tutor support materials in this publication are designed to supplement the guidance given in the units. They provide a suggested programme of assessment where the unit content has been divided into a number of manageable activities and assignments.

Where sample assessments do not cover all of the grading criteria, other assignments for the unit will need to be written by the tutor. All assignments should be subjected to the centre's normal quality assurance procedures.

These tutor support materials are not prescriptive. Tutors may feel that the unit can be delivered and assessed more effectively in a different way. This may be because of the way the qualification is organised within their centre or after taking into consideration their learners and their learning styles and prior learning.

Unit 1: Fundamentals of Dental Technology

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 1: Fundamentals of Dental Technology			

Assignment Title - Dental Models and Custom-made Impression Trays

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	identify the different types of dental model	1 a	
M1	describe the design requirements for each type of dental model	1 b	
D1	explain how poorly constructed dental models can have an effect on the outcome of a dental device	1 c	
P2, M2, D2	construct dental models to a clinically acceptable standard with substantial guidance/ with limited guidance/ working independently	2	
P3	identify the different types of custom-made impression tray	3 a	
M3	describe the design requirements for each type of custom-made impression tray	3 b	
D3	explain how a poorly designed and constructed tray can have an effect on the outcome of the master dental model	3 c	
P4, M4, D4	construct custom-made impression trays to a clinically acceptable standard/with substantial guidance/with limited guidance/working independently	4	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 1</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Fundamentals of Dental Technology</p>
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Assignment Title - Dental Models and Custom-made Impression Trays

The purpose of this assignment is to:

Enable learners to produce dental models from a variety of impression materials used in different dental specialties to an acceptable standard and then, utilising some of the models construct custom-made impression trays using a selection of materials and recognised construction techniques.

Scenario

You are working in a dental laboratory and have been assigned to the plaster room. Your job is to produce dental models for different dental specialties. Once the models are complete, some of them will require the construction of custom-made impression trays to enable the dentist to take a master impression.

Task 1

- a) From the display of dental models, identify each model by its design criteria. Your answers will be documented by the assessor.

This provides evidence for P1
- b) Dental models for the dental specialties require quite different design characteristics. Describe the recognised design criteria for dental models used in each of the specialties.

This provides evidence for M1
- c) A good fitting custom-made dental device depends upon the construction of a properly produced model. Using a chart, and under the headings of the different specialties, explain how poorly constructed models can have affect on the outcome of the finished dental device.

This provides evidence for D1

Task 2

From the supplied impressions, construct dental models to a clinically acceptable standard. Your final grade will depend on the amount of assistance you require during the production.

This provides evidence for P2 M2 D2

Task 3

- a) From the selection of custom-made impression trays, identify each by their design criteria. Your responses will be documented by your assessor.
This provides evidence for P3
- b) Custom-made impression trays have recognised design criteria. With the aid of diagrams, describe the design criteria for the different types of impression trays that may be requested.
This provides evidence for M3
- c) It is critical to follow correct design criteria for the construction of impression trays to ensure the successful outcome of a dental device. Explain why this is necessary and include what the possible outcome would be for custom-made dental devices if recognised design criteria were not adhered to.
This provides evidence for D3

Task 4

Utilising the dental models that you produced earlier, construct custom-made impression trays to a clinically acceptable standard. Your final grade will depend upon the amount of assistance you require during the production.

This provides evidence for P4 M4 D4

Sources of information

Textbooks

Basker RM and Davenport J - *Prosthodontic Treatment of the Edentulous Patient, 4th edition* (Blackwell Science, 2002) ISBN 0632059982

McCord JF and Smith P - *Treatment of Edentulous Patients* (Churchill Livingstone, 2004) ISBN 0443073074

McCabe JF and Wells AWG - *Applied Dental Materials, 8th edition* (Blackwell Science, 1998) ISBN 0632042087

Journals

Dental Lab Journal

Dental Technologies

Private Laboratory

Quintessence Journal of Dental Technology

The Dental Technician

Dental Laboratories Association

CRG Publications

FMC Communications Company

Quintessence Publishing

AE Morgan Publications Ltd.

Websites

www.derweb.co.uk

www.dla.org.uk

www.dta-uk.org

www.qjdt.co.uk

Dental Education Resources

Dental Laboratories Association

Dental Technicians Association

Quintessence Journal of Dental Technology

Unit 2: Medical Emergencies, First Aid and Communication in the Dental Team

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) or Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 2: Medical Emergencies, First Aid and Communication in the Dental Team			

Assignment title - Communication within the Dental Environment

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	identify the methods of communicating when giving, receiving and retrieving information	1	
P2	describe the barriers to communications	2	
M1	explain how communication barriers can be recognised and managed to avoid complaints	3	
D1	explain why effective working relationships will enhance and manage patient care	4	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 2</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Medical Emergencies, First Aid and Communication in the Dental Team</p>
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Assignment title - Communication within the Dental Environment

The purpose of this assignment is to:

Make learners aware of the reasons for maintaining effective working and social relationships through the various means of communication, highlight barriers to communication and enable them to identify these barriers and reduce the incidence of complaints.

Scenario

You are asked by the laboratory manager to prepare a client communication index for your establishment. They request that you include all the various methods of communication available to clients.

Task 1

Research and describe methods of communication, referring to giving, receiving and retrieving information relevant to the dental environment.

This provides evidence for P1

Task 2

Research what is meant by “barriers to communication”. Produce a comprehensive glossary of the barriers identified, with a description of each.

This provides evidence for P2

Task 3

Explain how the identified barriers to communication from Task 2 can be managed to avoid complaints, including the correct methods that should be used to deal with any complaints in the dental environment.

This provides evidence for M1

Task 4

Describe how the provision of dental services and devices is enhanced by effective relationships between the dental team, patients and their families.

This provides evidence for D1

Sources of information

Textbooks

Ewles L, Simnet I - *Promoting Health and Practical Guide* (Balliere Tindall 2003) ISBN 0702026638
Inglehart M, Bagramian R - *Oral Health related Quality of Life* (Quintessence 2002) ISBN 0867154217
Liebgott B - *The Anatomical Basis of Dentistry 2nd edition* (Mosby Elsevier 2001) ISBN 032301013X
St John Ambulance - *British Red Cross - First Aid Manual* (Dorling Kindersley 2002) ISBN 0751337048

Journals

<i>Dental Nursing</i>	Pensord Press Ltd.
<i>Dental Practice</i>	AE Morgan Publications Ltd.
<i>The Dental Technician</i>	AE Morgan Publications Ltd.

Websites

www.transactor.co.uk	Dental Lab Transactor
www.fusionsoftwareuk.co.uk	Fusion Software -Specialists in Dental Software
www.pioneersoftware.co.uk	Pioneer Software - Clinic Management Software
www.vistaheads.com	Microsoft Vista Resources
www.gdc-uk.org	General Dental Council

Unit 3: Dental Technology Techniques

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:		Submitted on:
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 3: Dental Technology Techniques			

Assignment title - Construction Methods for Simple Acrylic Dentures

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	outline the criteria for tooth selection	1	
M1	describe the process of tooth setting	2	
D1	discuss the effects of poor tooth selection and setting	3	
P2	describe the stages of construction for complete dentures including prescription instructions, health and safety and Medical Devices Directive (MDD) requirements	4	
M2	explain the types of articulators which may be used for denture construction, including their ability to simulate jaw movement	5	
P3, M3, D3	construct a range of simple acrylic dentures, using a variety of articulators and materials to a clinically acceptable standard, using all health and safety and quality assurance requirements, from given prescriptions, with substantial guidance/ with limited guidance/working independently	6	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 3</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Dental Technology Techniques</p>
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Assignment title - Construction Methods for Simple Acrylic Dentures

The purpose of this assignment is to:

Give learners the opportunity to construct simple acrylic dentures, using common construction techniques.

Scenario

The owner of ABC Dental Laboratory has asked you to produce a guide to the construction of simple acrylic dentures for use by learners. You have been asked to produce the following custom-made dental devices as a bench-mark for learners- Class 1 F/-, -/F and F/F.

Task 1

Using a flow diagram, outline the process that is followed when selecting anterior and posterior teeth for a patient. Take into account what effect the patient age, facial profile, gender, complexion and ethnic origin might have on the choice of teeth.

This provides evidence for P1

Task 2

With the aid of diagrams, describe basic setting up of anterior and posterior teeth for a Class 1 F/F denture to the wax try-in stage.

This provides evidence for M1

Task 3

Describe the problems that would be encountered if recognised criteria for tooth selection and setting are not adhered too, including the effect it would have on the patient's appearance and how it would affect the function of the dentures.

This provides evidence for D1

Task 4

Describe the stages of constructing class F/F complete dentures from first appointment to final fitting. Including prescription instructions, health and safety and Medical Devices Directives.

This provides evidence for P2

Task 5

List the different types of articulator available to the dental technician. Describe each articulator's range of movements and how it simulates human jaw movement.

This provides evidence for M2

Task 6

Construct the following simple acrylic dentures: Class 1 -/F, Class1 -/F and Class 1 F/F to a clinically acceptable standard using the information documented in Task 2.

This provides evidence for P3, M3, D3

Sources of information

Textbooks

Jagger D and Harrison A - *Complete Dentures - Problem Solving* (MacMillan Journals, 1999) ISBN 0904588572

Lamb DJ - *Problems and Solutions in Complete Denture Prosthodontics* (Quintessence Publishing, 1992) ISBN 1850970211

McCord A and Grant AF - *A Clinical Guide to Complete Denture Prosthetics* (MacMillan Journals, 2000) ISBN 0904588645

Sowter JB and Barton R E - *Removable Prosthodontic Techniques* (University of North Carolina Press, 1987) ISBN 0807841668

Journals

Dental Dialogue

TW Media UK

Dental Laboratory

The Dental Laboratories Association

Dental Technologies

CRG Publications

Quintessence Journal of Dental Technology

Quintessence Publishing

The Dental Technician

AE Morgan Publications Ltd

Websites

www.bracon.co.uk

Bracon Dental Suppliers

www.derweb.co.uk

Dental Education Resources

www.dla.org.uk

Dental Laboratories Association

www.dta-uk.org

Dental Technicians Association

www.metrodent.co.uk

Metrodent Dental Supplier

www.qjdt.co.uk

Quintessence Journal of Dental Technology

www.us.elsevierhealth.com

Journal of Prosthetic Dentistry

www.zahndental.com

Zahn Dental Suppliers

Unit 4: Dental Anatomy, Oral Biology and Disease

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name		Assessor Name	
Date Issued	Completion Date		Submitted on
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 4 : Dental Anatomy, Oral Biology and Disease			

Assessment Title - Anatomical Structures and their Relation to the Design of Custom-made Dental Devices

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	identify the intra-oral landmarks of the face and surrounding area, using appropriate anatomical terminology	1	
M1	describe the intra-oral landmarks of the face and surrounding area, using appropriate anatomical terminology	2	
D1	relate an understanding of the intra-oral landmarks of the face and surrounding structures to design criteria for custom-made dental devices	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 4</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Dental Anatomy, Oral Biology and Disease</p>
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Assignment title - Anatomical Structures and their Relation to the Design of Custom-made Dental Devices

The purpose of this assignment is to:

Give learners a general overview of the anatomical structures and associated tissues of the human oral cavity and associated extra-oral facial structures and to help learners to understand the importance of these structures in relation to the design and fabrication of custom-made dental devices.

Scenario

You have been asked to produce an illustrated reference booklet that can be used by other learners to identify anatomical structures which are relevant to the design of custom-made dental devices.

Task 1

Using correct anatomical terminology, annotate illustrations identifying the landmarks, features and structures of the oral cavity and surfaces of the face.

This provides evidence for P1

Task 2

Using correct anatomical terminology, fully describe and define the landmarks, features and structures identified in **Task 1**.

This provides evidence for M1

Task 3

Produce a written account, containing diagrams, to show an understanding of how the intra-oral landmarks, the immediate facial areas and structures of the oral cavity have an impact on the design and fabrication of custom-made dental devices.

This provides evidence for D1

Sources of information

Textbooks

Bath-Bologh M, Fehrenbach MJ and Herring SW - *Illustrated Dental Embryology, Histology and Anatomy* (Saunders, 2002) ISBN 0721601138

Brand R, Isselhard D - *The Anatomy of Orofacial Structures* (Mosby/Elsevier, 2003)
ISBN 0323019544

Fehrenbach MJ, Herring SW - *Illustrated Anatomy of the Head and Neck* (Saunders, 2001) ISBN 0721693636

Journals

British Standard Dental Vocabulary, General and Clinical Terms (BSI, 1992) BSI

Websites

www.bda.org	British Dental Association
www.cdta.org.uk	Clinical Dental Technicians Association
www.dental-technology.info	The Dental Digest
www.dentalguide.co.uk	UK and Ireland Dental Guide
www.dentstar.co.uk	International Dental Internet Resources
www.derweb.co.uk	Dental Education Resources on the web

Unit 5: Basic Dental Biomaterials Science

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:		Submitted on:
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) or Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 5: Basic Dental Biomaterials Science			

Assignment title - Properties and Uses of Dental Waxes

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P3	explain the use of dental waxes found within the dental laboratory	1	
M3	review the properties of dental waxes in relation to their structure	2	
D3	evaluate waxes used in the dental laboratory	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 5</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Basic Dental Biomaterials Science</p>
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<p>Assignment title - Properties and Uses of Dental Waxes</p> <p>The purpose of this assignment is to:</p> <p>Ensure that learners have an understanding of the properties of dental waxes currently used by the dental technician, with further development in the area of material selection for a specific role within the dental environment.</p>	
<p>Scenario</p> <p>Your employer has asked you to research the different waxes that are used in the dental laboratory so they can make a decision to update and improve the various procedures used to construct the range of custom-made dental devices.</p>	
<p>Task 1</p> <p>List the dental waxes that are commonly used in dental laboratories and, for each one, indicate the reasons why they are used.</p>	<p>This provides evidence for P3</p>
<p>Task 2</p> <p>List the ideal requirements of a dental wax.</p> <p>Describe the constituents of the dental waxes identified in Task 1 and state their effect on the material's physical and mechanical properties.</p> <p>Using a chart, compare the identified dental waxes with the ideal requirements.</p>	<p>This provides evidence for M3</p>
<p>Task 3</p> <p>Using the waxes from the list in Task 1, construct custom-made dental devices to the wax stage. When complete, use a chart to suggest how you would improve the particular procedure or, if necessary, change the type of wax.</p>	<p>This provides evidence for D3</p>

Sources of information

Textbooks

Anderson JN - *Applied Dental Materials, 8th edition* (Blackwell Science, 1998) ISBN 0632042087

Anusavice KJ - *Phillip's Science of Dental Materials, 11th edition* (WB Saunders, 2003) ISBN 0721693873

Craig RG and Powers JM - *Restorative Dental Materials, 11th edition* (Mosby, 2001) ISBN 0323014429

Gladwin MA and Bagby M - *Clinical Aspects of Dental Materials* (Lippincott Williams and Wilkins) ISBN 0781743443

Van Noort R - *Introduction to Dental Materials, 2nd edition* (C.V Mosby, 2002) ISBN 0723432155

Journals

Dental Technologies

CRG Publications

The British Dental Journal

Nature Publishing Group

The Dental Technician

AE Morgan Publications Ltd.

Websites

www.dental-waxes.com

Carmel Dental Waxes

www.metrodent.co.uk

Metrodent Dental Supplier

Unit 6: Legislation, Professionalism and Ethics in Dentistry

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:		Submitted on:
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 6: Legislation, Professionalism and Ethics in Dentistry			

Assignment title - The Roles of the Dental Team Integral to Dental Patient Care and Treatment

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	outline the roles of each member of the dental team employed in treatments involving dental appliances	1	
M1	describe the reasons for a team approach to dental healthcare, including its advantages and disadvantages	2	
D1	define how an integrated dental team approach can be managed to improve patient care	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 6</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Legislation, Professionalism and Ethics in Dentistry</p>
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<p>Assignment title - The Roles of the Dental Team Integral to Dental Patient Care and Treatment</p> <p>The purpose of this assignment is to:</p> <p>Ensure learners are aware of the roles of other dental team members and how they can be integrated into a team based approach.</p>	
<p>Scenario</p> <p>You are working for a dental technology department within a Primary Care Trust and have been asked by your line manager to produce a presentation, as part of a marketing strategy, that can be used to promote the dental team and help educate patients.</p>	
<p>Task 1</p> <p>Summarise the individual roles of dental team members involved with the provision of dental care.</p>	<p>This provides evidence for P1</p>
<p>Task 2</p> <p>Explain the reasons for a team approach to the provision of dental care including the advantages and disadvantages of this strategy.</p>	<p>This provides evidence for M1</p>
<p>Task 3</p> <p>Describe how a team approach can be managed effectively to provide optimal patient care.</p>	<p>This provides evidence for D1</p>
<p>Task 4</p> <p>Collate your information into a presentation format (computer-generated presentation, overhead projector, flip-chart, poster or leaflet)</p> <p>Make your presentation to other learners.</p>	<p>This provides evidence for P1, M1, D1</p>

Sources of information

Textbooks

Balmer C, Barlett D, Beighton D, Brand H and Brunton P - *Clinical Handbook of Dental Hygiene and Therapy* - ISBN 1405135409

Cross infection control information updates from the Department of Health and related professional bodies e.g. BDA

Ewles and Simnet (2003): *Promoting Health a Practical Guide* - ISBN 0702026638

Groten M, Janda R (2003): *Clinical Investigation of Medical Devices in Dentistry* ISBN 1850970696

Inglehart M, Bagramian R (2002): *Oral Health- Related Quality of Life* - ISBN 0867154217

Levison H - *Textbook for Dental Nurse, 9th edition* - ISBN 0632040319

Miles L - *Dynamic Dentistry* (Link Publishing, 2003) - ISBN 978-0965840910

Mitchell L and Mitchell D - *Oxford Handbook of Clinical Dentist, 3rd edition* - ISBN 0192629638

Pine C, Harris R (2007): *Community Oral Health* - ISBN 1850970920

Rule J, Veatch R (1993): *Ethical Questions in Dentistry 2nd Ed* - ISBN 0867152036

Journals

Dental Technologies

The British Dental Journal

The Dental Technician

CRG Publications

Nature Publishing Group

AE Morgan Publications Ltd.

Websites

www.derweb.co.uk

www.dla.org.uk

www.dta-uk.org

www.gdc-uk.org

www.mhra.org

Dental Education Resources

Dental Laboratories Association

Dental Technicians Association

General Dental Council

Medical and Health Care Products Regulatory Agency

Unit 7: Dental Public Health and Preventative Dentistry

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) or Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 7: Dental Public Health and Preventative Dentistry			

Assignment title - Design of Dental Appliances

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P4	identify the correct design criteria for dental appliances that will eliminate the potential for damage to the remaining dentition and oral tissues	1	
M4	describe how the correct design of dental appliances can prevent further damage to the remaining dentition and oral tissues	2	
D4	analyse the design criteria for dental appliances that will prevent further damage to the remaining dentition and oral tissues and suggest improvements	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 7</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Dental Public Health and Preventative Dentistry</p>
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Assignment title - Design of Dental Appliances

The purpose of this assignment is to:

Give learners an insight into how dental public health and preventative dentistry is administered and how dental care professionals can help to reduce the amount of necessary dental treatment.

Scenario

You are working in a dental laboratory and will rotate between the different specialties. You will have the opportunity to observe the construction of various custom-made dental appliances applicable to each specialty. It is important that you keep notes regarding the design and finishing techniques involved in the construction of these appliances for future reference.

Task 1

Describe, with the aid of diagrams, recognised design criteria for custom-made dental appliances for different dental specialties.

This provides evidence for P4

Task 2

State how the recognised design criteria help eliminate damage to the remaining dentition and oral tissues.

This provides evidence for M4

Task 3

Define the accepted design criteria for the various dental appliances that may be requested and then suggest improvements to reduce potential damage to a patient's remaining dentition and oral environment.

This provides evidence for D4

Sources of information

Textbooks

- Basker R M and Davenport C J - *Prosthetic Treatment of the Edentulous patient* (Blackwell, 2002) ISBN 0632059980
- Carr A, McGivney G P and Brown D - *Mc Crackens Removable Partial Prosthodontics* (Mosby 2004) ISBN 0323026281
- Ewles L and Simnett I- *Promoting Health, A Practical Guide* (Bailliere Tindall, 2003) ISBN 0702026638
- Harris N and Garcia-Godoy F - *Primary Preventative Dentistry* (Prentice Hall, 2003) ISBN 0130918911
- Humphris G and Ling M - *Behavioural Sciences for Dentistry* (Churchill Livingstone, 2000) ISBN 0443051909
- Isaacson K G, Muir J D and Reed R T - *Removable Orthodontic Appliances* (Butterworth-Heinemann 2000) ISBN 0723610533
- Murray JJ, Nunn JH and Steele JG (Editors) - *Prevention of Oral Diseases* (Oxford University Press, 2003) ISBN 01926632795
- Pine C and Harris R - *Community Oral Health* (Quintessence, 2007) ISBN 1850970920
- Rosentiel S F, Land M F and Fujimoto J - *Contemporary Fixed Prosthodontics, 3rd Edition* (Mosby, 2001) ISBN 081515559X

Journals

- The Journal of the British Dental Association* British Dental Association
- The Journal of the British Dental Hygienists Association* British Dental Hygienists Association

Websites

- | | |
|--|---|
| www.dentalguide.co.uk | UK and Ireland Dental Guide |
| www.dental-technology.info | The Dental digest |
| www.dentstar.co.uk | International Dental Internet Resources |
| www.derweb.co.uk | Dental Education resources on the web |
| www.healthcare.org.uk | Dental Links |
| www.the-probe.co.uk | The Probe |

Unit 8: Removable Complete Prosthodontics

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 8: Removable Complete Prosthodontics			

Assignment title - Implant and Precision Attachment Systems for Removable Complete Prosthodontics

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P5	list the types of implant and precision attachment systems used to retain removable complete prosthodontics	1	
M5	explain the clinical and laboratory procedures used to incorporate an implant or a precision attachment in removable complete prosthodontics	2	
D5	discuss how a team approach is essential to achieve a successful outcome to an implant or precision attachment treatment plan	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 8</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Removable Complete Prosthodontics</p>
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Assignment title - Implant and Precision Attachment Systems for Removable Complete Prosthodontics

The purpose of this assignment is to:

Give learners an insight into the laboratory and clinical procedures involved in the use of the complex retention systems available for removable complete prosthodontics.

Scenario

You are working in a dental laboratory that specialises in implant and precision attachment systems specific to removable complete prosthodontics. As you are new to this specialist area, you will need to work shadow a senior member of the technical staff to enable you to observe the laboratory procedures and stages relating to each system.

Task 1

There are numerous implant and attachment systems available for use with removable complete prosthodontics. Using the internet, textbooks, manufacturers, leaflets/manuals and patient leaflets, identify the popular systems that are in use, and then create a portfolio of your research material.

This provides evidence for P5

Task 2

Using the material collated in Task 1, select a system and describe the clinical and laboratory procedures used to incorporate this system into removable complete prostheses. Include diagrams of the components and the various stages of construction.

This provides evidence for M5

Task 3

A successful outcome to an implant or precision attachment treatment plan cannot occur without the close involvement of the dental team. Describe each dental team member's role in the process of providing this complex treatment, including criteria for patient selection, time factors, and costings.

This provides evidence for D5

Sources of information

Textbooks

Basker RM and Davenport J - *Prosthetic Treatment of the Edentulous Patient* (Blackwell Science, 2002) ISBN 0632059982

Feine JS and Carlsson GE - *Implant Overdentures* (Quintessence Publishing, 2003) ISBN 0867154306

Hobkirk J, Watson R and Searson L - *Introducing Dental implants* (Churchill Livingstone, 2003) ISBN 0443071853

Jenkins G - *Precision Attachments* (Quintessence Publishing, 1999) ISBN 1850970386

Misch CE - *Dental Implant Prosthetics* (Mosby, 2004) ISBN 0323019552

Journals

Dental Technologies

The Dental Technician

Quintessence Journal of Dental Technology

CRG Publications

AE Morgan Publications Ltd.

Quintessence Publishing

Websites

www.dentalguide.co.uk

www.dental-technology.info

www.dentstar.co.uk

www.derweb.co.uk

www.healthcare.org.uk

www.the-probe.co.uk

UK and Ireland Dental Guide

The Dental digest

International dental internet resources

Dental Education resources on the web

Dental Links

The Probe

Unit 9: Removable Partial Prosthodontics

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 9: Removable Partial Prosthodontics			

Assignment title - Reasons for Removable Partial Prosthodontics

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	describe the reasons for the provision of removable partial dentures	1	
M1	explain specific reasons, for and against, replacing missing teeth with removable partial dentures	2	
D1	discuss the potential limitations and advantages of removable partial dentures	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 9</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Removable Partial Prosthodontics</p>
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Assignment Title - Reasons for Removable Partial Prosthodontics

The purpose of this assignment is to:

Enable learners to understand the reasons why removable partial dentures are prescribed and the positive and negative effects they can have on the patient's oral environment and general health.

Scenario

Your employer is considering opening a prosthetic department in their laboratory. As part of the justification for this, they have asked you to write a report on why partial dentures are selected as part of a treatment plan.

Task 1

Describe the factors that influence the provision of simple removable partial dentures for partially dentate patients considering appearance, patient suitability, oral condition and cost.

This provides evidence for P1

Task 2

Not every patient with missing teeth requires a removable partial denture. Using a chart, describe the indications and contra indications of replacing missing teeth with a simple, removable partial denture.

This provides evidence for M1

Task 3

Present the information you have collated for Task 2 to the rest of your group. Stimulate conversation by supporting your evidence and responses from the group regarding the pros and cons of using removable partial dentures as a means of replacing missing teeth.

This provides evidence for D1

Sources of information

Textbooks

- Carr A, McGivney GP and Brown D - *McCracken's Removable Partial Prosthodontics, 11th edition* (Mosby, 2004) ISBN 0323026281
- Davenport JC and Basker RM - *A Clinical Guide to Removable Partial Denture Design* (British Dental Association Shop, 2000) ISBN 0904588637
- McCord JF, Grant A and Youngson C - *Missing Teeth: A Guide to Treatment Options* (Churchill Livingstone December 16, 2002) ISBN 044307153
- Wheater PR, Ash M, Nelson S - *Wheeler's Dental Anatomy, Physiology and Occlusion, 8th edition* (Saunders, 2003) ISBN 0721693822

Journals

- | | |
|--|-------------------------------------|
| <i>Aesthetics of Removable Dentures</i> | La Cour |
| <i>Dental Dialogue</i> | TW Media UK |
| <i>Dental Laboratory Journal</i> | The Dental Laboratories Association |
| <i>Dental Technologies</i> | CRG Publications |
| <i>Journal of Prosthetic Dentistry</i> | Elsevier health |
| <i>Quintessence Journal of Dental Technology</i> | Quintessence Publishing |
| <i>The Dental Technician</i> | AE Morgan Publication |

Websites

- | | |
|--|---|
| www.dentanet.org.uk | Dental Hygiene |
| www.dentstar.co.uk | International Dental Internet Resources |
| www.derweb.so.uk/index.html | Dental Education Resources |

Unit 10: Dental Radiology and Imaging

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 10: Dental Radiology and Imaging			

Assignment Title - The Basic Principles of Radiographic Theory

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	describe dental x-rays and the types of radiographic equipment available	1	
M1	explain how the image is produced on a dental radiograph	2	
D1	explain how dental digital radiographic equipment and imaging has advanced for both the clinician and the patient	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 10</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Dental Radiology and Imaging</p>
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Assignment title -Basic Principles of Radiographic Theory

The purpose of this assignment is to:

Enable learners to gain general understanding and knowledge of basic dental radiology, the concepts of radiographic imaging and how radiographic technology has progressed since it was first introduced in the provision of dental healthcare.

Scenario

You are going to spend a day in the local dental hospital's radiology department. Before you attend your training session, you will need to understand the systems used to generate images and how these images are processed.

Task 1

Provide a brief description of the history of x-rays. Using diagrams and photographs from dental magazines and manufacturers and literature, label the types of radiographic equipment that would be encountered in a general dental practice and in a dental hospital, include processing equipment.

This provides evidence for P1

Task 2

Explain how an x-ray image is formed on the radiographic film, including patient x-ray techniques, types of film and processing techniques.

This provides evidence for M1

Task 3

Radiographic equipment and procedures have changed dramatically over recent years as we are now in the era of digital imaging. Describe the modern advances in radiography, considering reduction in time, health and safety for operator and patient, elimination of dangerous chemicals, clearer images, faster processing and quality control.

This provides evidence for D1

Sources of information

Textbooks

Fehrenbach MJ and Herring SW - *Illustrated Anatomy of the Head and Neck* (Saunders, 1995) ISBN 0721640826

Logan B, Hutchings R and Reynolds P - *McMinn's Color Atlas of Head and Neck Anatomy* (Mosby, 2003) ISBN 0723431965

Miles DA, Van Dis ML, Jensen CW and Ferretti AB - *Radiographic Imaging for Dental Auxiliaries, 3rd Edition* (Saunders, 1999) ISBN 072168016X

Whaites E - *Essentials in Dental Radiography and Radiology* (Churchill Livingstone, 2002) ISBN 044307027X

White SC and Pharoah MJ - *Oral Radiology: Principles and Interpretation* (Mosby, 2003) ISBN 0323020011

Woelfel JB and Schied RC - *Dental Anatomy: Its Relevance to Dentistry* (Lippincott, 2001) ISBN 0781727979

Journals

Dental Nursing

Pensord Press Ltd.

Dental Practice

AE Morgan Publications Ltd.

The Dental Technician

AE Morgan Publications Ltd.

Websites

www.bda.org

British Dental Association

www.hpa.org.uk/dental

National Radiographic Protection Board

www.kodak.com/dental

Kodak

www.rcr.ac.uk

The Royal College of Radiologists

Unit 11: Design of Fixed Prosthodontics

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 11: Design of Fixed Prosthodontics			

Assignment title - Treatment Planning

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	list the stages of treatment planning, prior to treatment commencing, in fixed prosthodontic treatment	1	
M1	describe the duties of the dental team in relation to the provision of fixed prosthodontics	2	
D1	explain the advantages and limitations of fixed prosthodontics treatment	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 11</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Design of Fixed Prosthodontics</p>
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Assignment title - Treatment Planning

The purpose of this assignment is to:

Give learners an insight into treatment planning for fixed prosthodontic work. Learners will gain an understanding of the processes and considerations that have to be taken into account before a treatment plan is completed and any dental work commences.

Scenario

You have been asked to attend a meeting with the dental team regarding a treatment plan for a dentally compromised patient. It is imperative that you have a sound knowledge of treatment processes, planning sequences, the range of fixed custom-made dental devices available for specific conditions, and a good grasp of dental terminology.

Task 1

List and then justify the information that is required before a treatment plan can be agreed in relation to the use of fixed prosthodontic appliances.

This provides evidence for P1

Task 2

Fixed prosthodontic work requires the skills of a dental team to ensure a successful outcome to a treatment plan. Clarify the part each team members plays in the treatment, include the information that has to be supplied on the laboratory worksheet to enable technical staff to produce the requested device.

This provides evidence for M1

Task 3

Due to unforeseen conditions and problems, it is not always possible to provide a patient with the expected outcome for fixed prosthodontic work.

With the aid of a chart, explain the advantages and limitations of conservation work.

This provides evidence for D1

Sources of information

Textbooks

- Ash M and Nelson S - Wheeler's Dental Anatomy, Physiology and Occlusion, 8th edition(Saunders, 2003) ISBN 0721693822
- Craig RG and Powers JM - Restorative Dental Materials, 11th edition (Mosby, 2001) ISBN 0323014429
- Gladwin M: Clinical Aspects of Dental Materials (Lippincott Williams & Wilkins, 2004) ISBN 0781743443
- Hobkirk J, Watson R and Searson L - Introducing Dental Implants (Churchill Livingstone, 2003) ISBN 0443071853
- McNeil C - Science and Practice of Occlusion (Quintessence, 1997) ISBN 0867153040
- Naylor P - Introduction to Metal Ceramic Technology (Quintessence, 1992) ISBN 0867152370
- Rosenstiel SF, Land MF and Fujimoto J - Contemporary Fixed Prosthodontics, 3rd edition(Mosby, 2001) ISBN 081515559X
- Shillingburg HT, Hobo S, Whitsett LD, Jacobi R and Brachetts S - Fundamentals of Fixed Prosthodontics, 3rd edition(Quintessence, 1997) ISBN 086715201X
- Shillingburg HT, Wilson EL and Morrison JT - Guide to Occlusal Waxing, 3rd edition(Quintessence, 2000) ISBN 0867153857
- Smith BG - Planning and Making Crowns and Bridges (Taylor & Francis, 1998) ISBN 1853173142
- Touati B, Nathanson D and Miara P - Esthetic Dentistry and Ceramic Restorations (Taylor & Francis, 1998) ISBN 185317159X
- Van Noort R - Introduction to Dental Material, 2nd edition(Mosby Wolfe, 2002) ISBN 0723432155

Journals

- | | |
|--|-------------------------------------|
| <i>Dental Dialogue</i> | TW Media UK |
| <i>Dental Laboratory</i> | The Dental Laboratories Association |
| <i>The Dental Technician</i> | AE Morgan Publications Ltd. |
| <i>Dental Technologies</i> | CRG Publications |
| <i>Quintessence Journal of Dental Technology</i> | Quintessence Publishing |

Websites

- | | |
|---------------------------------|--|
| British Dental Association | www.bda.org |
| Dental Laboratories association | www.dla.org.uk |
| General Dental Council | www.gdc-uk.org |

Unit 12: Complex Dental Materials Science

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) or Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 12: Complex Dental Materials Science			

Assessment Title - The characteristics and uses of refractory materials

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P7	list the constituents, properties and uses of the commonly used dental refractory materials	1	
M5	outline how the expansion of refractory materials can be controlled by chemical and physical methods	2	
D5	discuss the faults which can occur through incorrect use of refractory materials and describe the cost implications of this	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 12</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Complex Dental Materials Science</p>
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Assignment title - Characteristics and Uses of Refractory Materials

The purpose of this assignment is to:

Enable learners to provide evidence of their knowledge of refractory materials used in the lost wax process and to give an account of their characteristics and uses.

Scenario

You are competent at waxing up restorations and now have the opportunity to proceed to the next stage in the construction process of fixed prosthodontic restorations. You will work shadow a member of staff who is competent in the use of the various refractory materials and will have the opportunity to select and invest waxed- up patterns for the direct technique.

Task 1

There are different types of refractory materials on the market but their constituents and properties differ for certain reasons. Using a chart, identify the commonly used refractory materials, their uses, constituents and properties.

This provides evidence for P7

Task 2

Explain the expansion mechanisms related to refractory materials and how they can be controlled by recognised methods, include hygroscopic expansion.

This provides evidence for M5

Task 3

If refractory materials are not handled and used correctly, problems will occur during investing, burnout and casting. Describe the reasons why this may happen, including the implications for the laboratory and surgery in relation to time and cost.

This provides evidence for D5

Sources of information

Textbooks

Anderson JN - *Applied Dental Materials, 8th edition* (Blackwell Science, 1998) ISBN 0632042087

Anusavice KJ - *Phillip's Science of Dental Materials, 11th edition* (WB Saunders, 2003) ISBN 0721693873

Craig RG and Powers JM - *Restorative Dental Materials, 11th edition* (Mosby, 2001) ISBN 0323014429

Gladwin MA and Bagby M - *Clinical Aspects of Dental Materials* (Lippincott Williams and Wilkins) ISBN 0781743443

Van Noort R - *Introduction to Dental Materials, 2nd edition* (C.V Mosby, 2002) ISBN 0723432155

Journals

Dental Technologies

CRG Publications

Journal of Prosthetic Dentistry

Elsevierhealth

Quintessence Journal of Dental Technology

Quintessence Publishing

The British Dental Journal

Nature Publishing Group

The Dental Technician

AE Morgan Publications Ltd.

Websites

www.bracon.co.uk

Bracon Dental Suppliers

www.dentalexcellencetech.com

Fundamentals of Esthetics (Dents TW Media)

www.derweb.co.uk

Dental Education Resources

www.dla.org.uk

Dental Laboratories Association

www.dta-uk.org

Dental Technicians Association

www.metrodent.co.uk

Metrodent Dental Supplier

www.zahndental.com

Zahn Dental Suppliers

Unit 13: Techniques for Manufacturing Fixed Prosthodontics

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
UNIT 13: Techniques for Manufacturing Fixed Prosthodontics			

Assignment title: Sub-structure Production Techniques

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	describe the methods of constructing sub-structures	1	
M1	describe current casting and melting methods, including common casting faults and their reasons	2	
D1	explain the techniques for soldering, pre- and post-ceramic	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 13</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Techniques for Manufacturing Fixed Prosthodontics</p>
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<p>Assignment title - Sub-structure Production Techniques</p> <p>The purpose of this assignment is to:</p> <p>Enable learners to understand the manufacturing process for producing metal and ceramic copings, furnace burnout requirements, casting and melting methods, soldering techniques and health and safety matters relating to these processes.</p>	
<p>Scenario</p> <p>You have been asked by the laboratory owner to complete a guide on manufacturing processes for future trainees to enable them to produce sub-structures for recognised conservation procedures.</p>	
<p>Task 1</p> <p>List the types of sub-structure copings that are in common use in conservation technology. Describe how each of these is constructed.</p>	<p>This provides evidence for P1</p>
<p>Task 2</p> <p>Describe current casting and melting methods used to produce metallic copings, include common casting faults and the reasons why they occur.</p>	<p>This provides evidence for M1</p>
<p>Task 3</p> <p>There are various techniques used in conservation technology to solder sub-structures. Identify the methods and then describe, with the use of diagrams, pre- and post- ceramic soldering.</p>	<p>This provides evidence for D1</p>

Sources of information

Textbooks

Naylor P - *Introduction to Metal Ceramic Technology* (Quintessence, 1992) ISBN 0867152370

Rosenstiel SF, Land MF and Fujimoto J - *Contemporary Fixed Prosthodontics, 3rd edition* (Mosby, 2001) ISBN 081515559X

Shillingburg HT, Whitsett LD, Jacobi R and Brachett S - *Fundamentals of Fixed Prosthodontics, 3rd edition* (Quintessence, 1997) ISBN 086715201X

Smith BG - *Planning and Making Crowns and Bridges* (Taylor & Francis, 1998) ISBN 1853173142

Journals

Dental Technologies

CRG Publications

Dental Laboratory

The Dental Laboratories Association

Dental Dialogue

TW Media UK

The Dental Technician

A E. Morgan Publication Co. Ltd

Quintessence Journal of Dental Technology

Quintessence Publishing Co. Ltd

Websites

www.brsd.org

British Society for Restorative Dentistry

www.bda.org

British Dental Association

www.dental-technology.info

The Dental Digest

www.dentalexcellencetech.com

Shades, a World of Colour (Dents TW Media)

www.dentalguide.co.uk/index.html

UK and Ireland Dental Guide

www.derweb.co.uk/index.html

Dental Education resources on the web

www.dla.org.uk

Dental Laboratories association

www.dta-uk.org

Dental Technicians Association

Unit 14: Quality Assurance in Dental Technology

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) or Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 14: Quality Assurance in Dental Technology			

Assignment title: Evolution of Quality Assurance and the Introduction of Quality Systems into the Dental Laboratory

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	explain how quality assurance has evolved in the dental laboratory, including quality assurance, quality management and quality control	1	
M1	describe how companies that have effective quality assurance procedures are more successful in business than those that do not	2	
D1	evaluate how quality management, quality control and quality assurance have proved beneficial to a dental laboratory	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 14</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Quality Assurance in Dental Technology</p>
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Assignment title -Evolution of Quality Assurance and the Introduction of Quality Systems into the Dental Laboratory

The purpose of this assignment is to:

Give learners an understanding of how quality assurance has evolved and the reasons for applying quality assurance within dental technology.

Scenario

Quality control evolved in business several decades ago to improve the manufacturing process and produce consistent to the end products. Manufacturing processes in dental laboratories must comply with current legislation. The application of quality assurance gives a clear indication to the dentist and patient that regulations have been adhered to throughout manufacture and that the product will meet the highest quality standard.

Task 1

Provide a brief account of how quality assurance has developed.

Explain in writing what is meant by the following terms:

- quality assurance
- quality management
- quality control

This provides evidence for P1

Task 2

Compare companies who apply quality control procedures with those who do not.

This provides evidence for M1

Task 3

Explain, in writing, how compulsory registration with the Medical and Healthcare Regulatory Agency (MHRA) has enabled dental laboratories to comply with quality assurance procedures. Examine and document the differences between a dental laboratory before and after registration with the MHRA.

This provides evidence for D1

Sources of information

Textbooks

Dale BG - *Managing Quality* (Blackwell, 2003) ISBN 0631236147

Hoyle D - *ISO 9000:2000 the A to Z Guide* (Butterworth-Heinemann, 2002) ISBN 0750658444

Hoyle D - *ISO 9000: Quality Systems Handbook* (Butterworth-Heinemann, 2000) ISBN 0750644516

Peach Robert W, Peach B and Ritter DS - *The Memory Jogger 9000/2000: A Pocket Guide to Implementing the ISO 9001 Quality Systems Standard* (Goal Q P C Inc, 2000) ISBN 1576810321

Seddon J - *The Case Against ISO 9000: How to Create Real Quality in Your Organisation* (Oak Tree Press, 2000) ISBN 1860761739

Journals

GDC Gazette

Published by the General Dental Council

The Dental Technician

A.E. Morgan Publications Ltd.

The Dental Laboratory Magazine

The Dental Laboratory Association Ltd

Websites

www.dla.gov.uk

Dental Laboratories Association (DAMAS)

www.hse.gov.uk

Health & Safety Executive

www.iso.org

International Standards Organisation

www.isoqar.com

ISOQAR (Quality Assurance Auditors)

www.mrha.gov.uk

Medicines and Healthcare Regulatory Agency

www.qmuk.co.uk

Quality Management UK

Unit 15: Principles of Orthodontic Therapy Regimes

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) or Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 15: Principles of Orthodontic Therapy Regimes			

Assignment title - Why do you need Orthodontic Treatment?

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	outline the rationale for orthodontic treatment	1	
M1	describe factors that can relate to the success or failure of orthodontic treatment	1	
D1	discuss the benefits, disadvantages and potential risks associated with undertaking orthodontic treatment	1	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 15</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Principles of Orthodontic Therapy Regimes</p>
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Assignment title - Why do you need Orthodontic Treatment?

The purpose of this assignment is to:

Give learners the opportunity to develop their knowledge and understanding of the need for, benefits of and problems that may arise from orthodontic therapy.

Scenario

An orthodontic practice has asked you to give a talk to their dental nurses. This is to help them explain to patients the need for orthodontic treatment, what the patient and dental team can do to ensure successful treatment, the benefits of treatment and problems that may arise during or after treatment.

Task 1

Produce a booklet that dental nurses can use as a reference guide when dealing with patients in their practice who may require orthodontic treatment.

Include the following:

- An overview of how common malocclusion can be treated
- The demand for orthodontic treatment
- Treatment need (IOTN)
- Dental health of patient
- A patient's psychological welfare

This provides evidence for P1

- Reasons for the success and failure of orthodontic treatment
- Treatment planning
- Patient cooperation
- Patient suitability

This provides evidence for M1

- The benefits of orthodontic treatment
- Disadvantages and risks involved (root resorption, loss of periodontal support, decalcification, soft tissue damage and TMJ dysfunction)

This provides evidence for D1

Include an information leaflet that can be given to patients advising them of:

- Benefits of orthodontic treatment
- Risks involved
- Tooth cleaning and diet
- Breakages
- Commitment

This provides evidence for P1 M1 D1

Sources of information

Textbooks

Bishara SE - *Textbook of Orthodontics* (Saunders, 2001) ISBN 0721682898

Gill DS - *Orthodontics at a Glance* (Blackwell 2008) ISBN 9781405127882

Ireland AJ and McDonald F - *The Orthodontic Patient: Treatment and Biomechanics* (Oxford 2003) ISBN 978-0-19-851048-2

McNeill C - *Science and Practice of Occlusion* (Quintessence, 1997) ISBN 0867153040

Mitchell L - *An Introduction to Orthodontics, 3rd edition* (Oxford, 2007) ISBN 978-0-19-856812

Proffit WR and Fields HW - *Contemporary Orthodontics, 4th edition* (Mosby, 2007) ISBN 13: 978-0-323-04046-4

Vanarsdall RL, Vig KWL and Graber TM - *Orthodontics: Current Principles and Techniques, 4th edition* (Mosby, 2005) ISBN 0323026214

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Dental Technologies

Quintessence Journal of Dental Technology

The Dental Technician

CRG Publications

Quintessence Publishing

AE Morgan Publications Ltd.

Websites

www.bda.org

www.dental-technology.info

www.dentalguide.co.uk

www.dentstar.co.uk

www.derweb.co.uk

www.dta-uk.org

www.orthota.co.uk

British Dental Association

The Dental Digest

UK and Ireland Dental Guide

International Dental Internet Resources

Dental Education Resources on the web

Dental Technicians Association

Orthodontic Technicians Association

Unit 16: Design, Manufacture and Modification of Orthodontic Appliances

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 16: Design, Manufacture and Modification of Orthodontic Appliances			

Assignment Title - Removable Appliance Design, Function and Construction

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1	identify different removable appliances and their components	1	
P2	describe the design principles of removable orthodontic appliances	2	
M1	describe the construction principles of removable orthodontic appliance components	3	
D1	explain the different functions of removable orthodontic appliance designs	4	
P3 M2 D2	manufacture removable orthodontic appliances from a given prescription, with substantial guidance/limited guidance/working independently	5	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 16</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Design, Manufacture and Modification of Orthodontic Appliances</p>
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<p>Assignment title - Removable Appliances Design, Function and Construction</p> <p>The purpose of this assignment is to:</p> <p>Give learners the opportunity to develop their knowledge and understanding of removable orthodontic appliance design and construction.</p>	
<p>Scenario</p> <p>A national orthodontic laboratory chain needs a manual to explain the design theory and function of orthodontic appliances and they have asked you to produce it. To support the manual, you are required to construct practical examples of orthodontic appliances.</p>	
<p>Task 1</p> <p>Create a booklet with pictorial examples of removable orthodontic appliances. Label each appliance and its components.</p>	<p>This provides evidence for P1</p>
<p>Task 2</p> <p>Describe the design principles of removable orthodontic appliances. Consider base plates, active and fixative component design, anchorage, and fixation.</p>	<p>This provides evidence for P2</p>
<p>Task 3</p> <p>Using the information from Task 1, describe how you would construct this range of removable orthodontic appliances.</p>	<p>This provides evidence for M1</p>
<p>Task 4</p> <p>Explain, in detail, the function of the appliances that you have been asked to construct in Task 5. Describe how removable orthodontic appliances help promote the aims of orthodontic treatment.</p>	<p>This provides evidence for D1</p>
<p>Task 5</p> <p>Construct the requested removable orthodontic appliances to a clinically acceptable standard.</p>	<p>This provides evidence for P3 M2 D2</p>

Sources of information

Textbooks

Gill DS - *Orthodontics at a Glance* (Blackwell 2008) ISBN 9781405127882

Huge S - *The Orthodontic Appliance Reference Manual* (Ortho-Care UK) Ref: 8222-050

Isaacson KG, Muir JD and Reed RT - *Removable Orthodontic Appliances* (Butterworth-Heinemann, 2000) ISBN 0723610533

McDonald F and Ireland AJ - *Diagnosis of the Orthodontic Patient* (Oxford Medical Publications, 1998) ISBN 0192628895

Mitchell L - *An Introduction to Orthodontics, 3rd edition* (Oxford, 2007) ISBN 978-0-19-856812

Richardson A - *Interceptive Orthodontics* (Macmillan Journals, 2000) ISBN 0904588564

Orton HS - *Functional Appliances in Orthodontic Treatment Construction* (Quintessence, 1993) ISBN 1850970122

Jones ML and Oliver RG (Editors) - *Walther and Houston's Orthodontic Notes* (Wright, 2000) ISBN 0723610657

Journals

British Standard Dental Vocabulary, General and Clinical Terms (BSI, 1992) BSI

Dental Technologies CRG Publications

Quintessence Journal of Dental Technology Quintessence Publishing

The Dental Technician AE Morgan Publications Ltd.

Websites

www.braceface.com

Orthodontics and Fun

www.dentalhealth.org.uk

British Dental Health Foundation

www.dla.org.uk

Dental Laboratory Association

www.dta-uk.org

Dental Technicians Association

www.orthota.co.uk

The Orthodontic Technicians Association UK

Unit 17: Advanced Dental Technology Techniques and Procedures

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:	Submitted on:	
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 17: Advanced Dental Technology Techniques and Procedures			

Assignment Title - The Selection and Use of Semi-precision and Precision Attachments

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P4	identify the clinical procedures that are carried out during the treatment of patients requiring semi-precision and precision attachments	1	
P5	list the different attachment systems used in dental technology	2	
M4	compare the suitability of materials used for dental attachments	3	
M5	describe the technical procedures for simple restorative techniques that incorporate dental attachments	4	
D4	explain the common techniques used in dental technology to produce complex restorations incorporating dental attachments	5	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 17</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Advanced Dental Technology Techniques and Procedures</p>
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Assignment title - The Selection and Use of Semi-precision and Precision Attachments

The purpose of this assignment is to:

Enable learners to demonstrate their knowledge of how to select and use dental attachments for different types of dental appliances. Learners will be able to discuss the design concepts and placement principles for different types of attachments.

Scenario

You have been asked to produce a report on dental attachments by a dental technology publishing company who is sourcing articles for a new private dental technology magazine. You will need to include a clinical and technical procedure to help readers select attachments to meet their requirements.

Task 1

Describe the clinical procedures that a patient experiences as part of a treatment plan involving dental attachments.

This provides evidence for P4

Task 2

State the different attachment systems used in dental technology.

This provides evidence for P5

Task 3

Investigate materials that are used for dental attachments and summarise their suitability for this type of restorative work.

This provides evidence for M4

Task 4

Illustrate and document the stages that occur during the technical fabrication of simple appliances that incorporate dental attachments.

This provides evidence for M5

Task 5

Explain how dental attachments are incorporated into more complex restorative appliances.

This provides evidence for D4

Sources of information

Textbooks

Drago C - *Implant Restorations: A Step-by-Step Guide* (WileyBlackwell; 2nd Edition edition, 2007) ISBN-13: 978-0813828831

Lee S J et al - *Applications of Orthodontic Mini Implants* (Quintessence, 2007) ISBN 978-0-86715-465-8

Mormann W H - *State of the Art of CAD/CAM Restorations: 20 Years of CEREC* (Quintessence 2006) ISBN-13: 978-1850971641

Sherring - Lucas et al - *Attachments for Prosthetic Dentistry: Introduction and Application* (Quintessence Publishing Co Ltd, 1994) ISBN-13: 978-1850970361

Thomas S et al - *Contemporary Dental and Maxillofacial Imaging, An Issue of Dental Clinics (The Clinics: Dentistry)* (Saunders 2008) ISBN-13: 978-1416062868

Van Noort R - *Introduction to Dental Materials, 2nd edition* (C.V Mosby, 2002) ISBN 0723432155

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The British Dental Journal

Nature Publishing Group

The Dental Technician

AE Morgan Publications Ltd.

Dental Technologies

CRG Publications

Websites

www.bracon.co.uk

Bracon Dental Suppliers

www.zahndental.com

Zahn Dental Suppliers

Unit 18: Work-based Learning in Dental Technology

Assessment Activity Front Sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner Name:		Assessor Name:	
Date Issued:	Completion Date:		Submitted on:
Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Dental Technology (QCF) <i>or</i> Edexcel BTEC Level 3 Extended Diploma in Dental Technology (QCF)			
Unit 18: Work-based Learning in Dental Technology			

Assignment title - Produce a Plan and Accompanying Logbook for a Suitable Work-based Project

In this assessment you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the learner is able to:	Task no.	Page numbers
P1 M1	produce a plan for a suitable work-based project, to include a written and practical element, with substantial guidance/ with limited guidance	1	
D1	discuss the suitability of the work-based project plan that has been produced	2	
P2	produce a logbook containing evidence relating to the practical component	3	
M2	create photographic evidence of each stage of construction of the practical component	3	
D2	provide a detailed costing of materials and time taken for the practical component	3	

Learner Declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature:

Date:

<p>Unit 18</p> <p>Start date:</p> <p>Deadline date:</p> <p>Assessment feedback will be provided by:</p> <p>Assessor:</p>	<p>Work-based Learning in Dental Technology</p>
<p>Assignment title - Produce a Plan and Accompanying Logbook for a Suitable Work-based Project</p> <p>The purpose of this assignment is to:</p> <p>Give learners the opportunity to select an area of dental technology that they intend to specialise in. The assignment gives learners an opportunity to meet and discuss their selected area with experienced technical staff in order to produce a custom-made dental device of their choice and maintain a logbook to support their interest and provide evidence.</p>	
<p>Scenario</p> <p>You are working in a dental laboratory and have an interest in one area of dental technology. The laboratory owner has given you the opportunity to produce an appliance from your chosen speciality and will provide you with access to laboratory services including technical backup and materials.</p>	
<p>Task 1</p> <p>Investigate the specialist areas of dental technology and select one area. Produce a plan of how you intend to complete your project. Include aims and objectives, choice of appliance and materials. You should also indicate the techniques you intend to use to construct the appliance and a timeframe for completion.</p> <p style="text-align: right;">This provides evidence for P1 M1</p>	
<p>Task 2</p> <p>Organise a meeting with a senior specialist technician (mentor) to discuss your plan's suitability. Document your mentor's feedback on the information that you have included in your plan for Task1.</p> <p style="text-align: right;">This provides evidence for D1</p>	
<p>Task 3</p> <p>Complete a logbook regarding your chosen appliance, including stages of construction (photographs, SOPs), clinical visits (dates), materials (selection and cost), equipment used and a personal reflection at each construction stage with mentor feedback (dated and signed).</p> <p style="text-align: right;">This provides evidence for P2 M2 D2</p>	

Sources of information

Textbooks

A Carr, G P McGivney and D Brown - *Mc Crackens Removable Partial Prosthodontics* (Mosby 2004) ISBN 0323026281

K G Isaacson, J D Muir and R T Reed - *Removable Orthodontic Appliances* (Butterworth-Heinemann 2000) ISBN 0723610533

R M Basker and C J Davenport - *Prosthetic Treatment of the Edentulous patient* (Blackwell, 2002) ISBN 0632059980

R van Noort - *Introduction to Dental Materials* (Mosby 2007) ISBN 0723434047

S F Rosentiel, M F Land and J Fujimoto - *Contemporary Fixed Prosthodontics, 3rd Edition* (Mosby, 2001) ISBN 081515559X

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Dental Technologies

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AE Morgan Publications Ltd.

Quintessence Journal of Dental Technology

Quintessence Publishing

Private Laboratory

FMC Communications Company

Websites

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www.dental-technology.info

The Dental digest

www.dentalguide.co.uk

UK and Ireland Dental Guide

www.dentstar.co.uk

International Dental Internet Resources

www.derweb.co.uk

Dental Education resources on the web

www.healthcare.org.uk

Dental Links

www.qjdt.co.uk

Quintessence Journal of Dental Technology

www.the-probe.co.uk

The Probe

www.zahndental.com

Zahn Dental Suppliers

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