

Dental Assistant: Dental Science 3

Exam Information	Description
Exam number 722 Items 30 National Career Cluster Health Science NCHSE Health Science Bundle Certification available Yes	The Dental Science 3 industry certification exam assesses the ability of learners to assist a dentist or dental hygienist in performing the functions of a dental practice. The exam includes evaluations of chair-side assisting, patient preparation, front office functions, selected dental office laboratory procedures, and an introduction to radiology.

Exam Blueprint and Performance Skills

Standard	Percentage of exam score
1. Prosthodontic Procedures	31%
2. Common Surgical Practices	25%
3. Endodontic Procedures	17%
4. Orthodontic Skills	8%
5. In-Office Laboratory Procedures	19%

*Includes performance skill evaluation

Standard 1 - Prosthodontic Procedures

Candidates will perform skills and assist with indirect prosthodontic procedures.

Objective 1 Identify and explain the types of prosthetic appliances.

1. Fixed
 1. Crowns
 2. Bridges
 3. Veneers
 4. Inlays/Onlays
 5. Implants
2. Removable
 1. Partial denture
 2. Full denture

Objective 2 Explain the setup and use of instruments for crown and bridge procedures.

1. Crown and Bridge prep tray
 - a. Instruments
 - i. Basic setup
 - ii. Hand-cutting instruments (spoon excavator)
 - iii. Cord packing instrument
 - iv. Crown and bridge scissors
 - v. Cement spatula
 - b. Accessories
 - i. Local anesthetic setup
 - ii. HVE tip
 - iii. Saliva ejector
 - iv. Three-way syringe tip
 - v. High and low-speed handpieces with assortment of burs
 - vi. Retraction cord
 - vii. Dental floss
 - viii. Articulating paper and holder
 - ix. Cotton rolls
 - x. 2x2 gauze
 - xi. Final impression material and tray
 - xii. Temporary crown material
 - xiii. Temporary cement
2. Crown and Bridge seat tray
 - a. Instruments

- i. Basic setup
 - ii. Spoon excavator
 - iii. Cement spatula
 - iv. Hemostat
- b. Accessories
 - i. Local anesthetic setup
 - ii. HVE tip
 - iii. Saliva ejector
 - iv. Three-way syringe tip
 - v. High and low-speed handpieces with an assortment of burs
 - vi. Dental floss
 - vii. Articulating paper and holder
 - viii. 2x2 gauze
 - ix. Permanent cement/bonding
 - x. Bite stick

Objective 3 Complete laboratory authorization forms

Objective 4 Explain how to mix cements

- 1. Permanent
 - a. Polycarboxylate
 - b. Glass ionomer
 - c. Zinc phosphate
- 2. Temporary
 - a. Zinc phosphate
- 3. Liner
 - a. Calcium hydroxide

Objective 5 Explain the set up and use of instruments for the delivery of removable prosthodontics (partials and dentures)

- 1. Basic set up
- 2. Denture
- 3. Hand mirror
- 4. Articulating paper and holder
- 5. Handpieces
- 6. Pressure indicating paste
- 7. Finishing burs

8. Acrylic burs
9. Pliers

Optional: Standard performance evaluations on the final page of this document.

Standard 2 - Common Surgical Practices

Candidates will demonstrate basic knowledge of and assist with common surgical procedures.

Objective 1 Explain the setup and use of instruments in a simple extraction setup.

1. Local anesthetic
2. Basic setup
3. Periosteal elevator
4. Elevator (dentist choice)
5. Forceps (dentist choice – tooth dependent)
6. Surgical curettes
7. Sterile gauze
8. Surgical aspirator tip

Objective 2 Explain the setup and use of instruments in a surgical extraction setup.

1. Local anesthetic
2. Basic setup
3. Periosteal elevator
4. Elevators (dentist choice)
5. Forceps (dentist choice – tooth dependent)
6. Surgical curettes
7. Root tip picks
8. Bone files
9. Mallet and chisel
10. Rongeur
11. Sterile gauze
12. Surgical aspirator tip
13. Scalpel
14. Suture
15. Needle holders or hemostat
16. Suture scissors
17. Cheek/tissue retractor

18. Handpiece and surgical bur

19. Bite block

Objective 3 Discuss post-operative instructions following extractions to a patient.

1. Control of swelling

2. Causes and treatment of dry-socket

3. Control of post-surgical bleeding

4. Diet

Objective 4 Explain the setup and use of instruments used in suture removal.

1. Basic setup

2. Suture scissors

3. Sterile gauze

Optional: Standard performance evaluations on the final page of this document

Standard 3 - Endodontic Procedures

Candidates will demonstrate basic knowledge of and assist with procedures related to endodontics.

Objective 1 Explain the set up and use of instruments and accessories used in endodontic treatment.

1. Basic setup

2. Local anesthetic setup

3. Dental dam setup

4. Handpieces with burs

5. Irrigating syringe

6. Broaches and files

7. Rubber stops

8. Paper points

9. Gutta-percha

10. Sealer

11. Lentulo spiral

12. Endodontic spoon excavator

13. Endodontic explorer

14. Endodontic spreaders and pluggers

15. Glick

16. Mm ruler

17. HVE tip
18. Three-way syringe tip
19. Irrigating solutions

Objective 2 Discuss steps in the endodontic exam including the methods of pulp testing.

1. Subjective
 - a. Pain
 - b. Swelling
 - c. Sensitivity
2. Objective
 - a. Medical and Dental history
 - b. Radiographs
3. Pulp testing
 - a. Thermal
 - b. Electric
 - c. Percussion
 - d. Palpation

Objective 3 Explain the steps of a root canal procedure.

1. Anesthetic
2. Isolation
3. Access pulp
4. Debridement
5. Obturation
6. Post-treatment instructions
7. Record in the patient chart.

Objective 4 Explain the setup and use of instruments for a dental dam.

1. Dental dam material
2. Dental dam hole punch
3. Dental dam frame
4. Dental dam clamps
5. Dental dam forceps
6. Crown and bridge scissors
7. Floss
8. Beaver-tail burnisher or explorer

Optional: Standard performance evaluations on the final page of this document

Standard 5 - In-Office Laboratory Procedures

Candidates will utilize materials and demonstrate skills related to in-office laboratory procedures.

Objective 1 Explain the set up and use of equipment found in the laboratory.

1. Model trimmer
2. Vacuum former
3. Impression vibrator
4. Dental lathe
5. Lab handpiece

Objective 2 List the three types of impressions taken in a dental office.

1. Preliminary
2. Final
3. Bite registration

Objective 3 Explain the setup and use of preliminary impressions.

1. Alginate impression
 - a. Alginate powder
 - b. Measuring scoop
 - c. Water and measuring cup
 - d. Rubber bowl
 - e. Mixing spatula
 - f. Upper and lower trays
 - g. Moist paper towels
2. Alginate impression pour up
 - a. Rubber bowl
 - b. Mixing spatula
 - c. Upper and lower impressions
 - d. Gypsum product
 - e. Water
 - f. Impression vibrator

Performance Skills Evaluation

Exam name: Dental Science 3

Candidate Name: _____

Performance assessments may be completed and evaluated any time before the certification is issued. The following performance skills can be used in connection with the associated standards and exam. The evaluator will function as the subject matter expert to determine if the candidate meets the skills requirements with a Yes/No for passing.

Standard 1 – Prosthodontic Procedures

- Set up for a crown and bridge procedure
- Mix cements – both temporary and permanent
- Prepare a set up tray for removable prosthodontics (partials and dentures)

Pass:

Standard 2 – Common Surgical Procedures

- Set up for a basic extraction
- Place and remove post-extraction dressings (2X2 gauze)
- Set up for a suture removal

Pass:

Standard 3 – Endodontic Procedures

- Set up for basic endodontic procedures
- Place and remove dental dam
- Take preliminary impressions
- Pour, trim, and evaluate the quality of models
- Fabricate a thermal plastic tray

Pass:

Evaluator Name:

Date:
