



**WREB**

A National Dental and Dental Hygiene Testing Agency

2012

**Restorative Examination  
Candidate Guide**



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**The mission of WREB is to be a leading developer and administrator of consistently valid, reliable, state-of-the-art competency assessments, administered with honesty, integrity, and appropriate technology via a collaborative effort of its administrative staff, educators, consultants, and examiners for Dental Health Care Providers and State Agencies that license dental professionals.**

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## GENERAL INFORMATION

This guide is designed to provide you with the WREB procedures for taking the restorative examination.

It is your responsibility to read and be familiar with the WREB Policy and Restorative Candidate Guides prior to attending the Candidate Orientation.

## PURPOSE OF THE EXAMINATION

The WREB Dental Hygiene Restorative Examination is a clinical examination designed to evaluate a candidate's ability to utilize professional judgment and competency in providing restorative procedures as allowed by state statute. The examination consists of the placement, carving, and finishing of one Class II amalgam and one Class II composite restoration on an assigned maxillary and mandibular dentoform tooth.

## EXAMINATION SUPPLIES AND MATERIALS

You must supply all restorative armamentarium for condensing, carving, and finishing one Class II amalgam and one Class II composite restoration.

WREB accepts only A4 and A4B composite shades and only A1 flowable shade.

**Composite surface sealer, unfilled resin, glaze(s) or flowable may only be used during placement. No composite surface sealer, unfilled resin, glazes or flowable may be placed over the finished restoration.**

"2" is the maximum score possible for Occlusal, Proximal and Margins if an examiner determines surface sealer, unfilled resin, glaze or flowable has been applied to any area of the restoration.

T mirrors are not allowed during the examination.

Candidates must supply the following:

- dentoform and preps (see pages 3-4)
- restorative instruments
- handpiece(s)
- metal or plastic air/water syringe tip(s)
- dental materials for restorative procedures

Protective eyewear, gloves, and mask must be worn during all procedures. Use of a face shield is acceptable in lieu of eyewear. Instruments do not have to be sterile. Both dentoform arches (maxillary and mandibular) should be labeled with your Candidate ID Number. ***Bring a box/container with packing material for transport of your dentoform to the grading area.***

Candidates are allowed to use their own amalgamators and curing lights (with curing shield or protective eyewear). ***Refer to the online school information (available on the WREB website) regarding handpiece information, compatible handpiece connections (three- or four-hole), curing lights, and other equipment rental.***

Schools are requested to provide the following:

- surface disinfectant
- barrier covers for dental units
- amalgam scrap containers
- face masks
- gloves
- amalgamators
- instrument trays

You must supply any needed materials not specifically listed above or stated in the school information (available on the WREB website).

Examiners do not use candidate instruments for grading. WREB provides examiners with the following materials and instruments:

- Butler fine waxed dental floss
- Front surface #4 or #5 mouth mirror
- UNC 12 periodontal probe
- Suter #2 or Hu-Friedy 2R/2L pigtail explorer
- Screwdrivers

## DENTOFORM CRITERIA

You must supply an articulated, hinged restorative dentoform that mounts on a rod post (***posts are supplied at the exam site***). The Columbia 860 series and the Kilgore D85SDP200 or D95SDP200 are the ***only*** acceptable dentoforms. A periodontal dentoform is ***not*** acceptable. The dentoform must meet the following criteria:

- have a full dentition (28 or 32 teeth)
- have only one (1) Class II molar preparation with an interproximal contact (in each quadrant)
- have no restorations, or sealants present in any of the remaining teeth
- prepped teeth and adjacent teeth are anatomically correct and properly placed
- prepped teeth and adjacent teeth are not mobile

If any of the preps or teeth adjacent to the preps are mobile, the examiners will tighten the teeth. It is to your advantage to ensure that the teeth are tight prior to the Check-In procedure.

It is in the candidate's best interest to present a dentoform at Check-In that is free of hard and soft tissue lacerations.

No point deductions are given for an unacceptable dentoform. If the dentoform does not meet the criteria, you will be registered as a ***“no show candidate”*** until you present the correct dentoform.

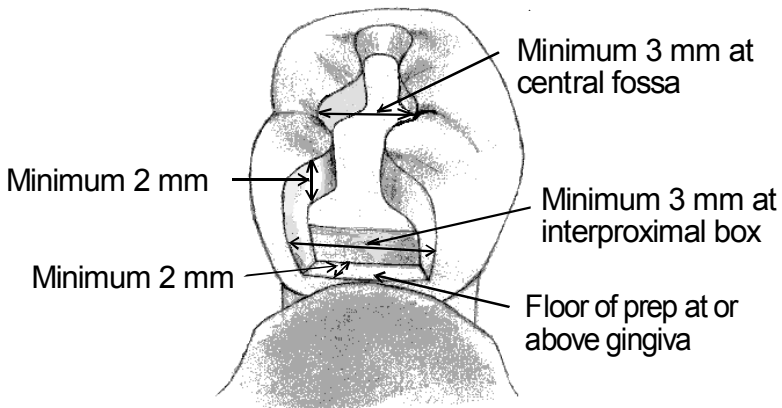
## PREPARATIONS CRITERIA

Selection of appropriate preparations is an important factor in the restorative examination. ***It is your responsibility to make sure the submitted preparations meet the established criteria.*** If a preparation is accepted by the examiners, ***no appeal may be based on preparation difficulty.***

The four required preps must meet the following Class II preparation criteria:

1. The occlusal of the preparation **must** extend from the prepped interproximal to the furthestmost fossa and include the entire occlusal surface.
2. The preparation is not less than **3 mm** in width at the central fossa and the interproximal box.
3. The preparation is not less than **2 mm** in depth from the cavosurface margin.
4. The floor of the preparation must be at or above the gingiva.

At least one maxillary and one mandibular prep must be acceptable for preparation assignments.



## PERFORMANCE EVALUATION

One hundred (**100**) points are possible. A score of seventy-five (**75**) is required to successfully pass the examination.

You will fail the examination if:

1. the wrong tooth is restored
2. the incorrect restorative material is placed in the tooth (for example: composite is assigned and amalgam is restored)

3. the natural patient position of the dentoform is intentionally altered on the rod post

## EXAMINATION GRADING SYSTEM

Each category (occlusal, proximal, and margins) of this examination is graded by three examiners on a 0-5 scale as follows:

<u>Scale</u>	<u>% of Points Received</u>
5	100.00%
4	88.00%
3	75.00%
2	55.00%
1	35.00%
0	0.00%

Your recorded score/percentage for each category is based on the middle (median) score of the three (3) scores assigned for each category. Using the median score corrects for a score assigned by one examiner that varies from the consensus of the other examiners. The two restorations are graded separately (50 points possible for each) and the scores are added together to determine your final grade (provided there are no other point deductions). The Grading Criteria Chart is found on pages 12-13. (Please note: Items which are ***bold and italicized*** on the WREB Dental Hygiene Restorative Grading Criteria are criteria which only apply to the composite restoration).

Each category is weighted as follows:

Occlusal	= 30%
Proximal	= 35%
Margins	= 35%

### Additional Point Deductions From Your Final Score:

- ▶ One (1) point will be deducted for each minute you continue working after the twenty-five (25) minute setup time.

- ▶ One (1) point will be deducted for each minute you continue working after the one hour and thirty (30) minutes examination “stop working” announcement has been made.
- ▶ One (1) point will be deducted for each preparation that is unacceptable.

A maximum of five (5) points will be deducted for damage to the hard or soft tissue if validated by two examiners at Check-Out. ***Damage to soft tissue is trauma in excess of 3 mm. Damage to hard tissue (prepped or adjacent teeth) is trauma in excess of 1 mm.***

## FORMS

Enclosed with this Candidate Guide is a ***Candidate Limitation of Liability Agreement*** form. This form includes a limitation of liability and indemnity agreement. The form must be read and signed prior to Candidate Orientation and will be collected before you receive your Candidate Packet.

At Candidate Orientation, you will receive the following:

- Candidate ID Badge
- Candidate Critique
- Prep Envelope
- Restorative Check-In Grade Sheet
- Restorative Check-Out Grade Sheet Booklet (3 pages)

The following additional forms are reviewed at Candidate Orientation:

- The **Restorative Assignment Sheet**. This sheet lists the assigned restorative preparations or, if applicable, information regarding an unacceptable dentoform or preparation(s).
- **Instructions to Candidate (ITC) Form**. This form will be given to you if you have submitted an unacceptable dentoform or prep(s), incurred late penalties, or have committed other infractions of exam protocol.

Please bring a #2 pencil and pen with you to orientation. There will be an opportunity to ask questions at the end of the Candidate Orientation.

## **CLINIC TOUR**

After the Candidate Orientation, a tour is provided by school faculty to familiarize you with clinic procedures and equipment, infection control and emergency protocol, disposal of biohazardous waste, and school policies.

## **EXAMINATION SETUP**

At the assigned time, you will be allowed to enter the clinic to set up your operatory and mount your dentoform on the rod post.

You are allowed to bring the WREB Restorative Candidate Guide and WREB Policy Guide into the clinic. You are allowed twenty-five (25) minutes to set up.

1. The dentoform should be properly positioned on the rod post to mimic a natural treatment position. Attach a plastic cover for amalgam scraps.
2. Examination armamentarium. At this time, you may practice with the provided amalgamators.
3. The Chief Examiner will check that your composite shade is A4 or A4B and flowable shade is A1. If not, you must acquire the correct shade and verify with the Chief Examiner prior to beginning the restorative procedures.

Notes, textbooks or other informative data, or electronic devices must **not** be brought into the clinic. A screwdriver may be used during the set up and break down, but must be stowed during the examination itself.

When the Chief Examiner announces the end of the twenty-five (25) minute set up time, you must leave the clinic.

## CLINICAL EXAM CHECK-IN PROCEDURES

After you exit the clinic, the examiners enter the clinic to evaluate the dentoform, the four (4) submitted preparations and assign two preparations for the restorative procedures.

1. One (1) examiner evaluates the dentoform and the four (4) preparations. If the dentoform and all preparations are acceptable, the examiner assigns one mandibular and one maxillary preparation for the restorative procedure. The assigned composite and amalgam preparations will be listed on your **Assignment Sheet**.
2. If the first examiner rejects the dentoform or one (1) or more of the preparations, a second examiner is required to validate the reason(s) for the rejection.
3. If the dentoform does not meet the criteria or the examiners are unable to assign a prep, you will be registered as a **“No Show Candidate”**. If you acquire the necessary items and re-submit the dentoform or preps to the Chief Examiner, the examiners will re-evaluate the dentoform or preps.
4. At the conclusion of the Check-In procedures, the examiners leave the clinic.

## CLINICAL EXAMINATION PROCEDURES

1. The Chief Examiner announces when you may re-enter the clinic area. The exam begins when the candidates enter the clinic. You are allowed one and one-half (1½) hours to complete the examination.

You are not allowed to leave the clinic for any reason during the examination. If you complete the examination before the one and one-half (1½) hour deadline, you may leave the clinic but you will not be allowed to re-enter the clinic until the cleanup time is announced.

2. If an assigned prep should break during the examination, inform the Chief or the Chief's Assistant. Your dentoform will be taken to the examiners' area and a prep in the SAME arch

will be assigned. If a prep cannot be assigned, it will be your responsibility to provide a new prep. No time compensations will be given. If you choose to discontinue the exam at this time, you will be registered as a **“No Show Candidate”** and forfeit your exam fees.

3. The Chief Examiner announces when there are five (5) minutes remaining until exam completion. At the end of the five minutes, you will be asked to stop working and exit the clinic.
4. The Chief Examiner assigns late penalties. A one (1) point deduction is subtracted from your score for each minute you continue working at the operator after the “stop working” announcement has been made.

## **CLINICAL EXAM CHECK-OUT PROCEDURES**

The dentofoms will be taken to another area for grading. Three (3) examiners independently score your restorations and evaluate the adjacent gingiva and hard tissue (*see Grading Criteria on pages 12-13*).

Exam scores cannot be tabulated on site; therefore, all test information must be sent to the WREB office for processing.

## **CONCLUSION OF THE EXAMINATION**

You are responsible for preparing your operator for the next candidate. Candidates are allowed to remain in the clinic for no more than twenty (20) minutes to complete the following procedures:

1. Clean and set up the operator.
2. Properly dispose of biohazard waste.

## REMOVAL OF PREPS FROM THE DENTOFORM

After the conclusion of the examination, you will be instructed to remove the two unused preps and the two finished preparations from your dentoform under the supervision of WREB staff. Place the four preps in the provided envelope and write your Candidate ID Number on the envelope. Turn in your Candidate Packet with your **Candidate ID Badge** and prep envelope. **Be advised that WREB Policy prohibits candidates from photographing any materials used in the exam.**

Complete your **Candidate Critique** and place in the designated area.

If you are taking a Dental Hygiene and/or Local Anesthesia examination at the same site, **retain your Candidate ID Badge and Candidate Packet.** The Badge and Packet **must** be turned in at the completion of your last exam.

Exam results will be withheld if these items are not returned.

It is WREB Policy to notify you of exam results as soon as possible. Generally, within thirty (30) days after the last scheduled exam day. Results will be posted on the WREB website and can be accessed via your candidate login (username and password). It is very important that you save your login information so that you may access your results. You will receive an email notification once your results are available online.

## REFERENCES

These texts were used as references in creating this examination and may be helpful resources for you.

Nelson, S. J. & Ash, M. M. (2009). Wheeler's Dental Anatomy, Physiology and Occlusion (9th ed.). St. Louis, MO: W. B. Saunders.

Ferracane, J. (2001). Materials in Dentistry: Principles and Applications (2nd ed.). Philadelphia: Lippincott, Williams, and Wilkins.

Fuller, J., Denehy, G. & Hall, S. (2001). Concise Dental Anatomy and Morphology (4th ed.). Iowa City, IA: University of Iowa.

# GRADING

	5	4	3
<b>30%</b> <b>O C C L U S A L</b>	<p>Replicates proper anatomy (restoring harmonious form).</p> <p>Ridges and marginal ridge present and properly formed.</p> <p><b>Smooth surface, no pits or voids.</b></p>	<p>Slight variation of harmonious form.</p> <p>Major grooves formed and positioned correctly.</p> <p>Supplemental grooves may or may not be present.</p> <p>Fossae present.</p> <p>Ridge and marginal ridge present, but slight variation.</p> <p><b>Slight surface irregularities (pitting or voids).</b></p>	<p>Moderate variation of harmonious form.</p> <p>Anatomy adequate.</p> <p>Marginal ridge height has functional contour.</p> <p>Anatomy or marginal ridge can be corrected with minimal polishing and finishing.</p> <p><b>Moderate surface irregularities (pitting or voids).</b></p>
<b>35%</b> <b>P R O X I M A L</b>	<p>Replicates proper anatomy (restoring harmonious form).</p> <p>Optimal contact - will allow waxed floss to pass through contact with proper resistance.</p> <p><b>Smooth surface, no pits or voids.</b></p>	<p>Slight variation of proximal contour, shape, and/or position of contact area.</p> <p>Nearly optimal contact - will allow waxed floss to pass through contact with near proper resistance.</p> <p><b>Slight surface irregularities (pitting or voids).</b></p>	<p>Moderate variation of proximal contour, shape, and/or position of contact area.</p> <p>Gingival-occlusal embrasures not defined, but functional.</p> <p>Barely adequate contact - will allow waxed floss to pass through contact with slight resistance, or moderately tight resistance (may shred waxed floss).</p> <p><b>Moderate surface irregularities (pitting or voids).</b></p>
<b>35%</b> <b>M A R G I N S</b>	<p>Minimal variation of cavosurface margin (+).</p> <p><b>No damage to hard tissue or slight scarring of tooth structure.</b></p>	<p>Slight variation of cavosurface margin (+ or -).</p> <p><b>Slight scarring of tooth structure in (multiple areas).</b></p>	<p>Moderate variation of cavosurface margin + or - (can be corrected with minimal polishing and finishing).</p> <p><b>Moderate scarring to tooth structure.</b></p> <p><b>Alters tooth structure without compromising normal tooth function or restoration.</b></p>

# CRITERIA

2	1	0
<p>Anatomy inadequately carved and/or over/under carved.</p> <p>Marginal ridge contour/height improper.</p> <p>Pits and fossae improperly placed (would alter occlusion or cause food impaction).</p> <p>Any ridges, oblique and/or transverse, improperly placed.</p> <p><b>Critical surface irregularities or defects (pitting or voids).</b></p> <p><b>Placement of glazing/unfilled resin over finished restoration.</b></p>	<p>Incorrect anatomy (would significantly alter function).</p> <p>Pits and fossae incorrectly placed.</p> <p>Incorrect marginal ridge contour/height &gt; 1mm (would significantly impact function).</p> <p>Improper manipulation or trituration of material.</p> <p><b>Severe surface irregularities or defects (pitting, voids, and/or fractures).</b></p> <p><b>Uncured resin.</b></p>	<p>Gross lack of anatomy.</p> <p><b>Gross surface irregularities or defects and/or fracture of restoration.</b></p>
<p>Critical variation of proximal contour, shape, and/or position of contact area.</p> <p>Improper contact - tight (may break waxed floss).</p> <p>Improper contact. (open / light).</p> <p><b>Critical surface irregularities or defects (pitting or voids).</b></p> <p><b>Placement of glazing/unfilled resin over finished restoration.</b></p>	<p>Severe variation of proximal contour, shape, and/or position of contact area.</p> <p>Contact wrong shape or position.</p> <p>Incorrect contact - cannot get floss through contact.</p> <p>Open contact. (Visibly open).</p> <p>Improper manipulation or trituration of material.</p> <p><b>Severe surface irregularities or defects (pitting, voids, and/or fractures).</b></p> <p><b>Uncured resin.</b></p>	<p>Grossly inadequate proximal contour or contact position.</p> <p>Gross open contact.</p> <p><b>Gross surface irregularities or defects and/or fracture of restoration.</b></p>
<p>Critical variation of cavosurface margin, open &gt; .5mm; integrity compromised (not correctable).</p> <p>1mm excess - would compromise periodontal health.</p> <p><b>Critical damage to tooth structure affecting normal function or restoration.</b></p> <p><b>Placement of glazing/unfilled resin over finished restoration.</b></p>	<p>Severe variation of cavosurface margin open &gt;1 mm (not correctable).</p> <p>&gt; 1mm excess - would compromise periodontal health.</p> <p><b>Severe damage to tooth structure affecting normal function or restoration (multiple areas).</b></p>	<p>Gross variation of cavosurface margins.</p> <p>Open margins with gross excess or deficiency (multiple).</p> <p><b>Gross damage to tooth structure.</b></p>

Grading criteria applies to both amalgam and composite restorations. The bold, italicized grading criteria applies only to the composite restorations.

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# CANDIDATE EXAMINATION SCHEDULE

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## **Orientation Time**

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## **Clinic Tour Time**

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## **Candidate ID Number on Grade Sheet (in pencil)**

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## **Setup Time (25-minute period)**

- ◆ Position the dentoform on the rod post.
- ◆ Attach a plastic cover for amalgam scraps.
- ◆ Set up examination armamentarium.
- ◆ Practice with the amalgamator.

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## **Assigned Clinical Examination Time (1½ hours)**

## **Clinical Examination**

If there is an **ITC** form at your operatory, see the Chief.

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## **End Time**

- ◆ Place dentoform in numbered container.
- ◆ Leave clinic area.

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## **Post Examination (20-minute period)**

- ◆ Properly clean the operatory and surrounding area.
- ◆ Dispose of contaminated biohazard waste in the proper containers.

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## **Pick up Dentoform**

- ◆ Supervised removal of preps.
- ◆ Turn in Candidate Packet with ID Badge.

