Orthodontics

National Dental Examining Board of Canada (NDEB) Virtual OSCE and Assessment of Fundamental Knowledge (AFK)

About 6% of the Virtual OSCE · 4 topics · 2026 blueprint

Orthodontics covers the diagnosis of malocclusion, growth and development, space management in the mixed dentition, and recognizing when and how to intercept problems or refer. It is about 6% of the Virtual OSCE in NDEB's 2026 blueprint. Questions ask you to classify an occlusion from photos or radiographs, spot problems that need early treatment, plan space maintenance, and choose the right timing for referral.

You should be able to: A 7 year old lost 84 early. The permanent incisors have erupted and 44 has little root formed. What space maintainer fits best?

Every topic: the key point and the trap

OR-1 Classifying malocclusion

Angle Class I: the mesiobuccal cusp of the maxillary first molar occludes in the buccal groove of the mandibular first molar.

Trap: Classifying from the canines or incisors alone. Angle classification is based on the first molar relationship; canine relation is a separate description.

OR-2 Problems to intercept early

Posterior crossbite with a functional shift (the mandible slides to one side on closing) should be corrected early, often with maxillary expansion, to avoid asymmetric growth.

Trap: Waiting for the permanent dentition to treat a functional posterior crossbite. Early correction is easier and avoids growth asymmetry.

OR-3 Space management in the mixed dentition

Early loss of a primary molar can allow drifting of adjacent teeth and loss of space for the successor; space loss is greatest in the first months after extraction.

Trap: Choosing a band and loop when the first permanent molar is not erupted. There is nothing to band, so the guidance must come from a distal shoe.

OR-4 Growth, imaging and timing of referral

Assess facial profile (convex, straight or concave), lip competence, symmetry and the relation of the jaws as well as the teeth.

Trap: Telling the parents to wait because children erupt at different rates. Asymmetry of more than 6 months points to a local cause such as a supernumerary tooth.

Key terms

Angle classification: A classification of malocclusion based on the first permanent molar relationship, Classes I to III.

Overjet: Horizontal distance from the labial surface of the lower incisor to the incisal edge of the upper incisor.

Overbite: Vertical overlap of the upper incisors over the lower incisors.

Functional shift: Deviation of the mandible from its natural path of closure because of a tooth interference.

Leeway space: The extra space gained when primary canines and molars are replaced by smaller permanent successors.

Space maintainer: An appliance that preserves space after early loss of a primary tooth.

Distal shoe: A space maintainer that guides an unerupted first permanent molar after early loss of the second primary molar.

Terminal plane: The relation of the distal surfaces of the upper and lower second primary molars.

Mesiodens: A supernumerary tooth in the maxillary midline that can block eruption of central incisors.

ANB angle: A cephalometric angle describing the anteroposterior relation between maxilla and mandible; about 2 degrees is normal.

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