Orthodontics, Pediatric, Geriatric, Special Needs

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

About 8% of the AFK · 5 topics · 2026 blueprint

Orthodontics, Pediatric, Geriatric and Special Needs dentistry covers growth and occlusal development, malocclusion and space management, care of children and adolescents, and adapting care for older adults and patients with disabilities. It is about 8% of the AFK in NDEB's 2026 blueprint. Its questions test developmental timing, classification, prevention, behaviour guidance and safe adaptation of treatment.

You should be able to: Why does a distal step terminal plane matter at age 5?

Every topic: the key point and the trap

PG-1 Occlusal development and malocclusion

Angle Class I: the mesiobuccal cusp of the maxillary first molar occludes in the buccal groove of the mandibular first molar; Class II the mandibular molar is distal to that position; Class III it is mesial.

Trap: Calling a functional shift a skeletal asymmetry, or deferring treatment until all permanent teeth erupt.

PG-2 Space management and eruption

Primary dentition: 20 teeth, FDI quadrants 5 to 8 (teeth 51 to 85); permanent dentition: 32 teeth, quadrants 1 to 4.

Trap: Choosing a band and loop when there is no erupted tooth distal to the space.

PG-3 Pediatric prevention, pulp therapy and behaviour

Fluoride varnish (5% sodium fluoride, 22,600 ppm, which is 22.6 mg of fluoride per mL) applied every 3 to 6 months reduces caries in children at elevated risk.

Trap: Confusing the amount of sodium fluoride with the amount of fluoride ion; doses are calculated as fluoride ion.

PG-4 Geriatric dentistry

Polypharmacy is common, and many drugs cause xerostomia; review the medication list at every visit.

Trap: Restoring every lesion without addressing the causes, which leads to new lesions at the margins.

PG-5 Patients with special needs

Down syndrome is associated with early, severe periodontitis, congenital heart defects (assess for endocarditis risk), delayed eruption, missing teeth and possible atlantoaxial instability (support the head and neck).

Trap: Waiting for proof or asking a colleague to report instead; the duty belongs to the dentist who has the suspicion.

Key terms

Angle classification: System for classifying malocclusion by the relationship of the first permanent molars.

Primate space: Natural spaces in the primary dentition, mesial to maxillary canines and distal to mandibular canines.

Leeway space: Difference in size between primary canines and molars and their permanent successors.

Terminal plane: Relationship of the distal surfaces of the primary second molars, which predicts the permanent molar relationship.

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

Probably toxic dose: 5 mg of fluoride per kg body weight, the dose that requires immediate treatment.

Silver diamine fluoride: 38% solution that arrests cavitated caries but stains lesions black.

Tell-show-do: Behaviour guidance technique of explaining, demonstrating, then performing a procedure.

Substitute decision-maker: Person legally authorized to make treatment decisions for a patient who lacks capacity.

Atlantoaxial instability: Laxity between the first two cervical vertebrae, seen in some people with Down syndrome.

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