MORPHOLOGY OF INDIVIDUAL PRIMARY TEETH

MAXILLARY CENTRAL INCISOR

The mesiodistal width of the crown of the maxillary central incisor is greater than the cervico-incisal length. Developmental lines are usually not evident in the crown; thus the labial surface is smooth. The incisal edge is nearly straight even before abrasion becomes evident.

There are well-developed marginal ridges on the lingual surface and a distinctly developed cingulum. The root of the incisor is conical with tapered sides.

MAXILLARY LATERAL INCISOR

The outline of the maxillary lateral incisor is similar to that of the central incisor, but the crown is smaller in all dimensions. The length of the crown from the cervical to the incisal edge is greater than the mesiodistal width. The root outline is similar to that of the central incisor but is longer in proportion to the crown.

MAXILLARY CANINE

The crown of the maxillary canine is more constricted at the cervical region than are the incisors, and the incisal and distal surfaces are more convex. There is a well-developed sharp cusp rather than a relatively straight incisal edge. The canine has a long, slender, tapering root that is more than twice the length of the crown. The root is usually inclined distally, apical to the middle third.

MANDIBULAR CENTRAL INCISOR

The mandibular central incisor is smaller than the maxillary central incisor, but its labio-lingual measurement is usually only 1 mm less. The labial aspect presents a flat surface without developmental grooves. The lingual surface presents marginal ridges and a cingulum. The middle third and the incisal third on the lingual surface may have a flattened surface level with the marginal ridges, or there may be a slight concavity. The incisal edge is straight and bisects the crown labio-lingually. The root is approximately twice the length of the crown.

MANDIBULAR LATERAL INCISOR

The outline of the mandibular lateral incisor is similar to that of the central incisor but is somewhat larger in all dimensions except labio-lingually. The lingual surface may have greater concavity between the marginal ridges. The incisal edge slopes toward the distal aspect of the tooth

MANDIBULAR CANINE

The form of the mandibular canine is similar to that of the maxillary canine, with a few exceptions. The crown is slightly shorter, and the root may be as much as 2 mm shorter than that of the maxillary canine. The mandibular canine is not as large labio-lingually as its maxillary counterpart.

MAXILLARY FIRST MOLAR

The greatest dimension of the crown of the maxillary first molar is at the mesio-distal contact areas, and from these areas the crown converges toward the cervical region

The mesio-lingual cusp is the largest and sharpest. The disto-lingual cusp is poorly defined, small, and rounded.

The buccal surface is smooth, with little evidence of developmental grooves. The three roots are long, slender, and widely spread.

MAXILLARY SECOND MOLAR

There is a considerable resemblance between the maxillary second primary molar and the maxillary first permanent molar. There are two well-defined buccal cusps, with a developmental groove between them. The crown of the second molar is considerably larger than that of the first molar.

The bifurcation between the buccal roots is close to the cervical region. The roots are longer and heavier than those of the first primary molar, and the lingual root is large and thick compared with the other roots.

The lingual surface has three cusps: a mesio-lingual cusp that is large and well developed a disto-lingual cusp, and a third and smaller supplemental cusp (the cusp of Carabelli). A well-defined groove separates the mesio-lingual cusp from the disto-lingual cusp. On the occlusal surface a prominent oblique ridge connects the mesio-lingual cusp with the disto-buccal cusp.

MANDIBULAR FIRST MOLAR

Unlike the other primary teeth, the first primary molar does not resemble any of the permanent teeth. The mesial outline of the tooth, when viewed from the buccal aspect, is almost straight from the contact area to the cervical region. The distal area of the tooth is shorter than the mesial area.

The two distinct buccal cusps have no evidence of a distinct developmental groove between them; the mesial cusp is larger than the distal.

There is a rhomboid outline present on the distal aspect. The mesiolingual cusp is long and sharp at the tip; a developmental groove separates this cusp from the distolingual cusp, which is rounded and well developed. The mesial marginal ridge is well developed, to the extent that it appears as another small cusp lingually. When the tooth is viewed from the mesial aspect, there is an extreme curvature buccally at the cervical third. The crown length is greater in the mesiobuccal area than in the mesio-lingual area; thus the cervical line slants upward from the buccal to the lingual surface.

The longer slender roots spread considerably at the apical third, extending beyond the outline of the crown.

The mesial root, when viewed from the mesial aspect, does not resemble any other primary root. The buccal and lingual outlines of the root drop straight down from the crown, being essentially parallel for more than half their length. The end of the root is flat and almost square.

MANDIBULAR SECOND MOLAR

The mandibular second molar resembles the mandibular first permanent molar, except that the primary tooth is smaller in all its dimensions. The buccal surface is divided into three cusps that are separated by mesiobuccal and disto-buccal developmental grooves. The cusps are almost equal in size. Two cusps of almost equal size are evident on the lingual surface and are divided by a short lingual groove.

The primary second molar, when viewed from the occlusal surface, appears rectangular with a slight distal convergence of the crown. The mesial marginal ridge is developed to a greater extent than the distal marginal ridge.

One difference between the crown of the primary molar and that of the first permanent molar is in the disto-buccal cusp; the distal cusp of the permanent molar is smaller than the other two buccal cusps.

The roots of the primary second molar are long and slender, with a characteristic flare mesio-distally in the middle and apical thirds.