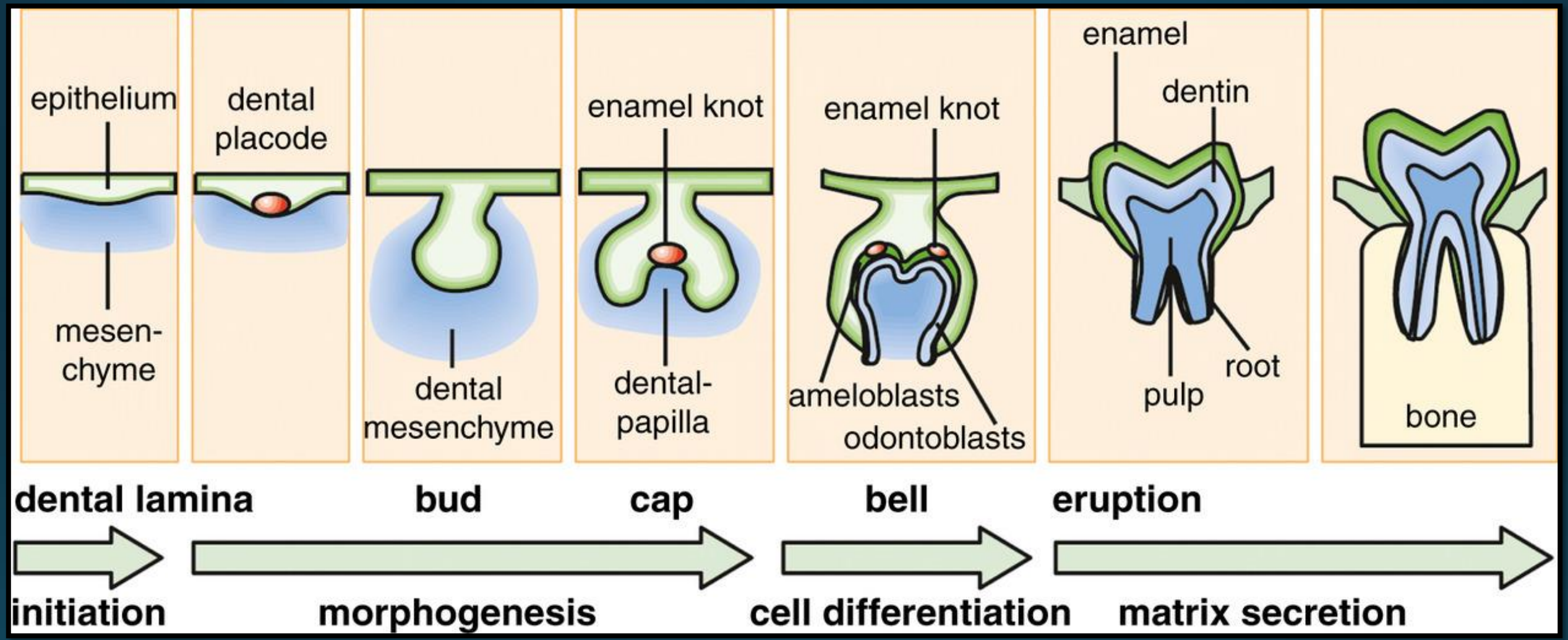
TOOTH DEVELOPMENT

STAGE/ TIME SPAN	MAIN PROCESSES INVLOVED	DESCRIPTION
Initiation stage (6^{th} to 7^{th} weeks)	Induction	Ectoderm lining stomodeum gives rise to oral epithelium and then to dental lamina, adjacent to deeper ectomesenchyme, which is influenced by the neural crest cells. The tissues are separated by a basement membrane
Bud stage (8^{th} week)	Proliferation	Growth of dental lamina into bud that proliferates growing ectomesenchyme
Cap stage (9^{th} to 10^{th} week)	Proliferation, differentiation, morphogenesis	Enamel organ forms into cap, surrounding mass of dental papilla from the ectomesenchyme and surrounded by mass of dental sac also from the ectomesenchyme. Formation of the tooth germ.

STAGE/ TIME SPAN	MAIN PROCESSES INVLOVED	DESCRIPTION
Bell stage/ 11^{th} to 12^{th} weeks	Proliferation, differentiation, morphogenesis	Differentiation of enamel organ into bell with four cell types and dental papilla into two cell types
Apposition stage/ varies per tooth	Induction, proliferation	Dental tissues secreted as matrix in successive layers
Maturation stage/ varies per tooth	Maturation	Dental tissues fully mineralized to their mature levels


epithelium
mesen-
chyme
dental
placode
dental
mesenchyme
enamel knot
dental-
papilla
enamel knot
ameloblasts
odontoblasts
enamel
dentin
pulp
root
bone
dental lamina
bud
cap
bell
eruption
initiation
morphogenesis
cell differentiation
matrix secretion