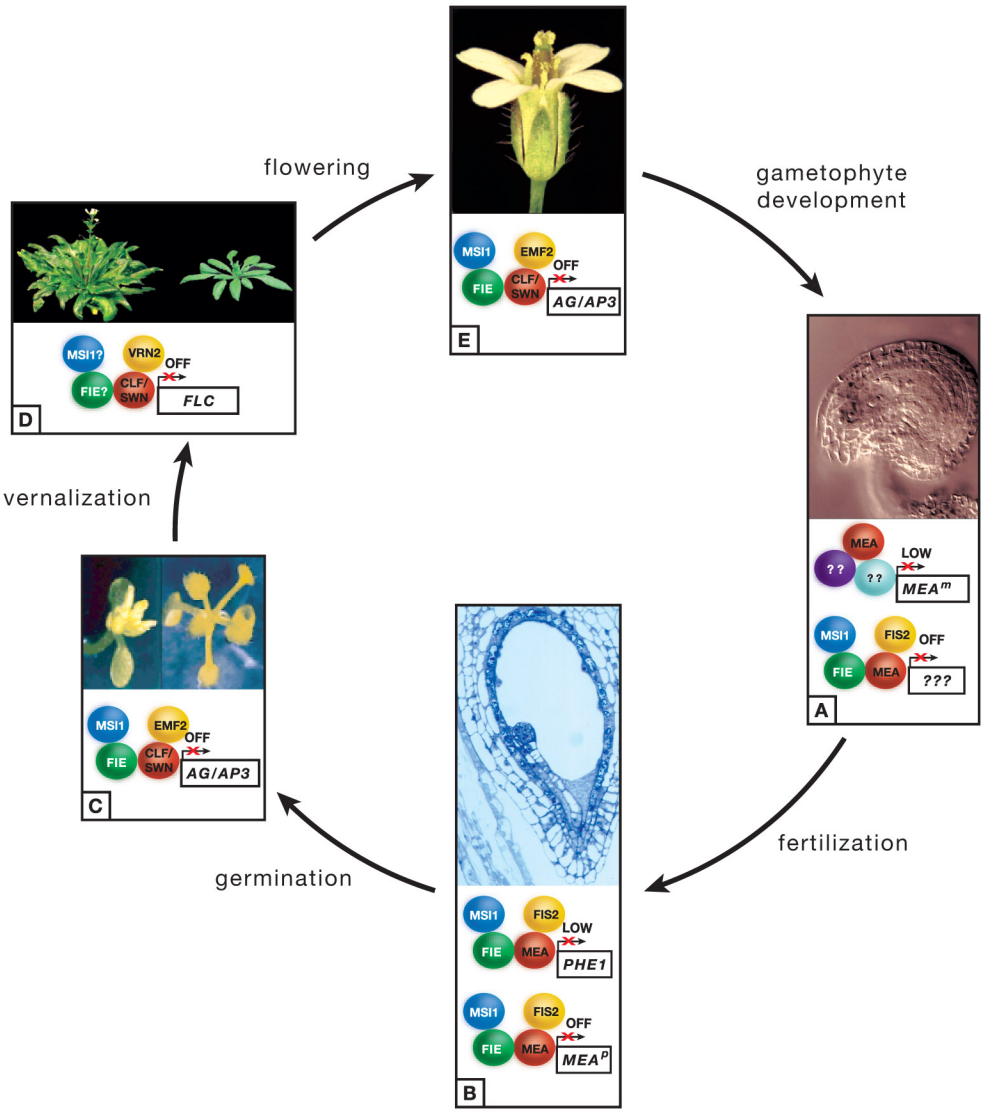

Figure 4. Involvement of Distinct PRC2s at Various Stages of Plant Development

During the plant life cycle, distinct variants of PRC2 (see Fig. 3) control developmental progression. (*A*) A cleared wild-type ovule harboring the female gametophyte in its center. The FIS complex represses target genes that control proliferation of the central cell; as in all *fis* class mutants, this cell proliferates in the absence of fertilization. Around fertilization, MEA is also required to maintain a low level of MEA^m expression, but this activity is independent of other components of the FIS complex. (*B*) Section of a wild-type seed harboring the embryo and endosperm, enclosed by the seed coat. After fertilization, the FIS complex is involved in the control of cell proliferation in embryo and endosperm. It maintains a low level of expression of *PHE1* and is required to keep the paternal MEA^P allele silent. (*C*) Wild-type (*right*) and *emf2* mutant (*left*) seedling 21 days after germination. The *emf2* seedling produced a flower with homeotic transformations but no leaves. The EMF complex prevents flowering and represses floral homeotic genes such as *AG*, *AP3*, and others. (*D*) Vernalized (*right*) and non-vernalized (*left*) plants, the latter being characterized by a prolonged vegetative phase and the production of many leaves. During the vegetative phase of development, exogenous and endogenous signals induce flowering. Vernalization leads to the repression of the floral repressor *FLC* and thus promotes flowering. The maintenance of this repression depends on the VRN complex. (*E*) Wild-type *Arabidopsis* flower. During flower organogenesis, the EMF complex regulates floral homeotic genes that determine the identity of floral organs. (*A,* Courtesy of J.M. Moore and U. Grossniklaus; *B,* courtesy of J.-P. Vielle-Calzada and U. Grossniklaus; *C,* reprinted, with permission, from Moon et al. 2003 [©ASPB]; *D,* reprinted, with permission, from Sung and Amasino 2004a [©Elsevier]; *E,* reprinted, with permission, from Page and Grossniklaus 2002 [©Macmillan].)