How are the diploid life cycle and the haploid life cycle related?

Essential Question: How has genetics played into allowing every organisms to survive as long as they have?

- Focus Question: How are the diploid life cycle and the haploid life cycle related?

Think:

Write a sentence using each one of the following terms: haploid, diploid, zygote.

Diploid Life Cycle

- The gametes, the sperm and the egg, join during fertilization. The result is a diploid zygote.
- This single diploid cell goes through mitosis and eventually gives rise to all of the cells of the adult, which are also diploid.
- In diploid life cycles, meiosis in germ cells of a multicellular diploid organism results in the formation of haploid gametes.

Meiosis and Gamete Formation

- Male animals produce gametes called **sperm.**
- A diploid germ cell goes through meiosis I. Two cells are formed, each of which goes through meiosis II.
- The four resulting cells change in form and develop a tail to form four sperm.