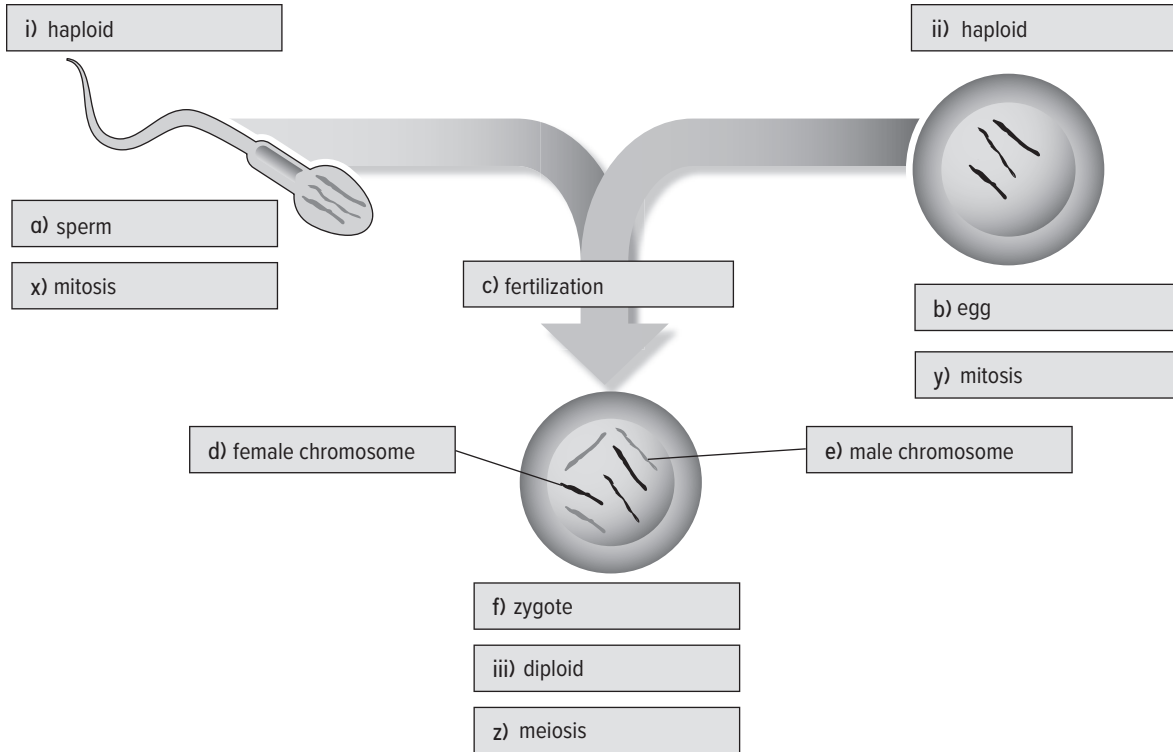


Topic 1.3 How do living things sexually reproduce?

Gametes, page 25

1.



2.

	Organism	Number of Chromosomes in the Gametes	Number of Chromosomes in the Body Cells
a)	Human, <i>Homo sapiens</i>	23	46
b)	Sea otter, <i>Enhydra lutris</i>	19	38
c)	Spirit bear, <i>Ursus americanus</i>	37	74
d)	Chinook salmon, <i>Oncorhynchus tshawytscha</i>	34	68
e)	Red fox, <i>Vulpes vulpes</i>	17	34

Meiosis, pages 26-27

1. The purpose of meiosis is to produce haploid gametes.
2.

a) telophase I	f) metaphase I
b) metaphase II	g) prophase II
c) prophase I	h) anaphase I
d) anaphase II	i) telophase II
e) interphase	

3. a) telophase I
- b) telophase II
- c) interphase
- d) prophase I
- e) telophase I
- f) telophase II
- g) prophase I
- h) prophase I or prophase II
- i) metaphase II
- j) prophase II
- k) anaphase II
- l) telophase I
- m) prophase I
- n) anaphase I
- o) metaphase I

Human Development, page 28

1. a) Skim – By looking over Figure 1.22 quickly, you can get an idea of the development of the fetus from a zygote.
 - b) Scan – By looking at Figure 1.22 somewhat quickly, you can determine right away that the embryonic stage is the first 8 weeks and the fetal stage is the last 30 weeks.
 - c) Study – By reading through all the descriptions in Table 1.2, you can learn what happens during each of the nine months.
2. Students' graphic organizers should summarize the concepts from Table 1.2. For example, they could use arrows to represent the sequential stages and timeframe of development.

Different Types of Sexual Reproduction, page 30

1.

Section of the Text	Main Topic	What the Text Says about the Main Topic	Supporting Details
Page 54, statement 1 about mammals	Development inside the female occurs in mammals.	“Development from fertilized egg to offspring of most mammals occurs inside the female, who is also the source of nourishment.”	<ul style="list-style-type: none"> • A cow carries a young elk inside her and gives birth. • The fetus of a sea otter develops inside the female sea otter. • A baby orca grows inside the mother.
Page 54, statements 2–5 about insects	Sexual reproduction in insects.	<p>“Reproduction in insects is usually sexual.”</p> <p>“In some insects, such as bees, eggs can develop without fertilization.”</p> <p>“Unfertilized eggs develop to become males and fertilized eggs develop to become females.”</p> <p>“The female mantis sometimes bites off the head of the male she mates with.”</p>	<ul style="list-style-type: none"> • Both male and female bees are involved in sexual reproduction. • A female mantis mates with a male mantis and then kills him after.
Page 54, statement 6 about fungi	Fungi can reproduce both sexually and asexually.	<p>“Fungi such as yeasts and moulds can reproduce sexually as well as asexually.”</p> <p>“Sexual reproduction in fungi is different from that in other organisms.”</p>	<ul style="list-style-type: none"> • Mould forms on bread through spore formation.
Page 55, statements 1–2 involving eggs	Development occurs outside the female.	<p>“For some animals, such as fish, frogs and birds, fertilized eggs develop into offspring outside the female’s body.”</p> <p>“Offspring are released when the eggs hatch.”</p>	<ul style="list-style-type: none"> • Sockeye salmon lay their eggs outside their body. • Tree frogs lay their eggs outside their body and external fertilization occurs. • Boreal owls lay their eggs in their nest and the eggs will hatch.
Page 55, statements 3–4 about plants	Sexual reproduction in plants.	<p>“Plants sexually reproduce in different ways.”</p> <p>“Those that grow from seeds require pollination for fertilization to occur.”</p> <p>“Pollen can be transferred by the wind or by animals, such as bees and birds.”</p>	<ul style="list-style-type: none"> • Columbia lilies produce pollen to reproduce. • Englemann Spruce produce seeds for reproduction.

1.3 Assessment, pages 31–33

- | | |
|--------------|--------------|
| 1. C | 11. C |
| 2. A | 12. C |
| 3. E | 13. D |
| 4. D | 14. A |
| 5. B | 15. D |
| 6. A | 16. A |
| 7. C | 17. D |
| 8. B | 18. D |
| 9. A | 19. C |
| 10. B | 20. B |
| 21. | |

