

# Pteridophyte Life Cycle and Anatomy

Botany · Answer Key · 23 Questions

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**1. Pteridophytes are considered an intermediate group of plants between which two other plant groups?**

- A) Algae and Bryophytes
- B) Bryophytes and Seed Plants**
- C) Seed Plants and Gymnosperms
- D) Gymnosperms and Angiosperms

**2. What are the two main generations in the life cycle of a fern?**

- A) Sporophyte and Zygote
- B) Gametophyte and Embryo
- C) Sporophyte and Gametophyte**
- D) Sorus and Prothallus

**3. The sporophyte generation in ferns is characterized by being:**

- A) Haploid
- B) Diploid**
- C) Triploid
- D) Asexual

**4. Meiosis in the fern life cycle occurs in which structure to produce spores?**

- A) Gametophyte
- B) Sporangium**
- C) Archegonium
- D) Protonema

**5. The haploid gametophyte generation of a fern is also known as the:**

- A) Sporophyte
- B) Embryo
- C) Prothallus**
- D) Rhizome

**6. What is the function of the sporangium in the fern life cycle?**

- A) To produce gametes
- B) To produce spores**
- C) To absorb water
- D) To protect the embryo

**7. Ferns possess vascular tissue, which allows them to be better adapted to:**

A) Aquatic environments

**B) Living on land**

C) Very cold climates

D) Desert conditions

**8. A limitation on the distribution of ferns, similar to bryophytes, is the water-dependent nature of which part of their life cycle?**

A) Sporophyte generation

B) Spore dispersal

**C) Sexual reproduction**

D) Rhizome growth

**9. The underground stem of a fern plant is called a:**

A) Frond

**B) Rhizome**

C) Pinnule

D) Fiddlehead

**10. What are the roots that grow from the rhizome of a fern called?**

A) Tap roots

B) Fibrous roots

**C) Adventitious roots**

D) Aerial roots

**11. The coiled, young fern leaf is commonly referred to as a:**

A) Frond

B) Rhizome

**C) Fiddlehead**

D) Pinna

**12. The entire fern leaf is called a:**

**A) Frond**

B) Pinna

C) Rachis

D) Pinnule

**13. The stalk of a fern leaf is known as the:**

A) Frond

B) Pinna

**C) Rachis**

D) Pinnule

14. A 'sorus' on the underside of a fern leaf is a cluster of:

- A) Gametophytes
- B) Embryos
- C) Sporangia**
- D) Rhizoids

15. The female sex organ in the gametophyte generation of a fern is called the:

- A) Antheridium
- B) Archegonium**
- C) Sporangium
- D) Ovary

16. The male sex organ in the gametophyte generation of a fern is called the:

- A) Antheridium**
- B) Archegonium
- C) Sporangium
- D) Testis

17. The prothallus, a heart-shaped structure, is the visible form of the fern's:

- A) Sporophyte generation
- B) Gametophyte generation**
- C) Embryonic stage
- D) Adult sporophyte

18. What substance is found within the sporangium and is released to form new gametophytes?

- A) Sperm
- B) Eggs
- C) Spores**
- D) Zygotes

19. The structure that covers a sorus in some ferns, providing protection, is called the:

- A) Rhizome
- B) Indusium**
- C) Protonema
- D) Pinnule

**20. Which of the following is a characteristic of the sporophyte generation in ferns?**

- A) It is haploid and produces gametes.
- B) It is diploid and produces spores.**
- C) It is haploid and produces spores.
- D) It is diploid and produces gametes.

**21. The 'protonema' is an early growth stage of the fern's:**

- A) Sporophyte
- B) Gametophyte**
- C) Embryo
- D) Seed

**22. Fertilization in ferns requires water for the movement of:**

- A) Spores
- B) Ova
- C) Sperm**
- D) Zygotes

**23. A 'compound leaf' in ferns means the leaf is divided into smaller units called:**

- A) Pinnae**
- B) Pinnules
- C) Rachises
- D) Sori