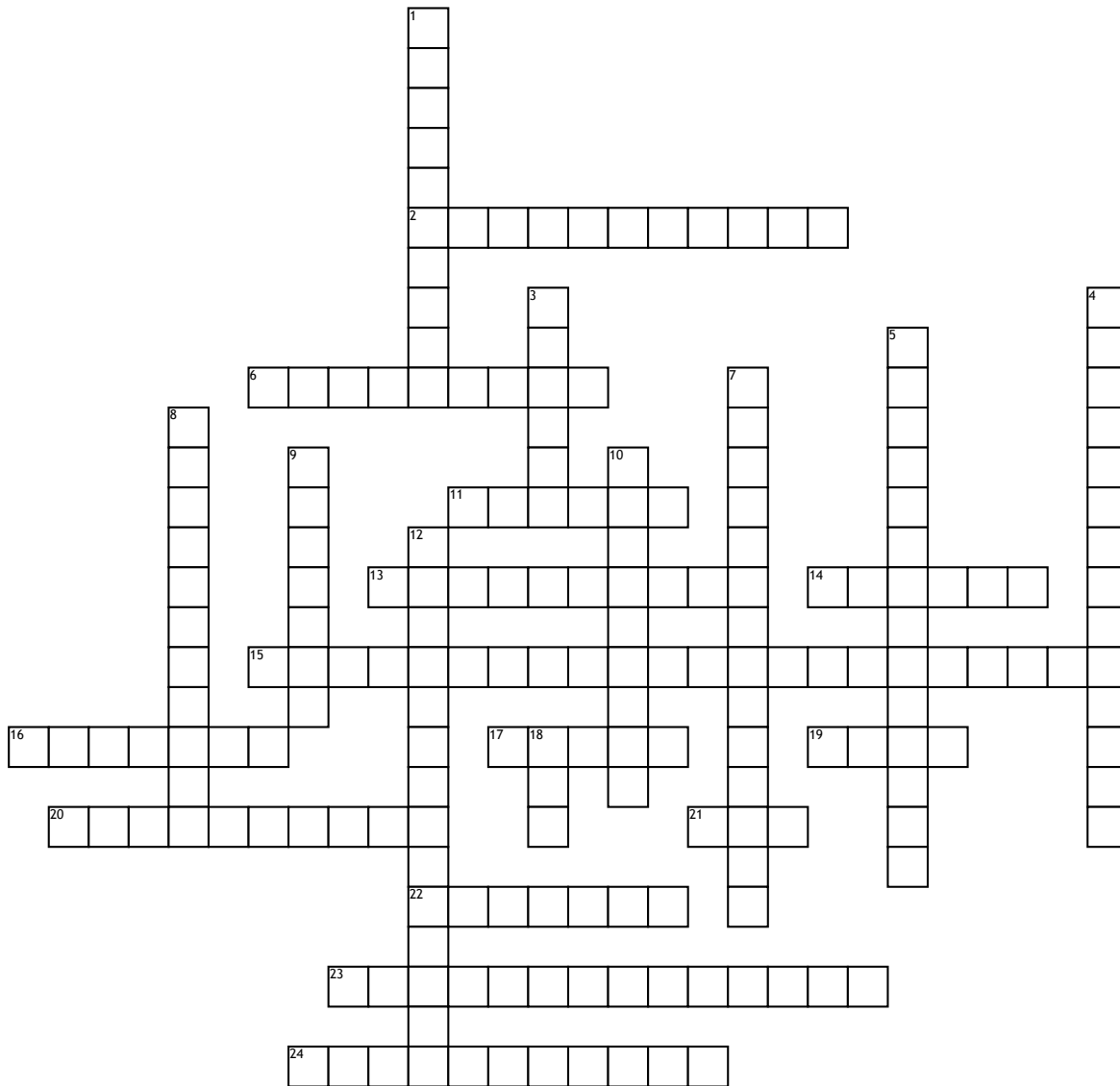


Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Unit 10 Plant Kingdom Photosynthesis Terms



## Across

2. absorb excessive light that would damage chlorophyll

6. pigments that absorb light at different wavelengths and then pass energy onto chlorophyll a; protects chlorophyll a

11. One stack of thylakoids, more than one stack is called "grana"

13. sac-like photosynthetic "coin" like structure where the light reactions occur

14. Released to the atmosphere via diffusion when water is split in PS2

15. moves high energy electrons from PS2 and PS1 and uses the lost energy from the electrons to pump hydrogen ions into the thylakoid lumen/space

16. Stomata, the small openings on the undersides of most leaves through which oxygen, water and carbon dioxide can move

17. An electron carrier involved in photosynthesis, which provides the high-energy electrons for the fixation of carbon dioxide into sugar in the Calvin cycle.

19. color of the Chlorophyll a pigment in plants that absorbs light energy used to carry out photosynthesis; located in the reaction center of photosystems

20. process that splits water in PS2

21. the main energy source for all cells; required for the Dark Reactions

22. describes the electrons that are passed in a thylakoid membrane

23. the process that autotrophs use to convert sunlight into food (glucose) Requires Carbon dioxide and water to produce oxygen and glucose

24. Light \_\_\_\_ Reactions set of reactions in photosynthesis that do not require light; energy from ATP and NADPH is used to build high-energy compounds such as sugar; also called the Calvin cycle

## Down

1. cells that control the opening and closing of the stomata

3. The solution that surrounds the thylakoids in a chloroplast; Calvin cycle happens here

4. \_\_\_\_ reactions of photosynthesis that use energy from light and water to produce ATP, NADPH and oxygen that is released into the atmosphere, Occurs in Thylakoids

5. \_\_\_\_ pigments includes Chlorophyll a the main pigment in

7. A light capturing protein complex in the thylakoid membrane of a chloroplast; splits water into electrons, protons, and oxygen gas.

8. organelle where photosynthesis occurs, captures sunlight and converts into chemical energy

9. A waxy covering on the surface of stems and leaves that acts as an adaptation to prevent plants from dehydrating

10. Organisms that make their own food, able to convert light energy into chemical energy

12. A light capturing protein complex in the thylakoid membrane of a chloroplast; reduces NADP<sup>+</sup> to NADPH.

18. molecule that is converted to ATP for energy storage