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Waterweed simulation lab answers

Effect of light color on the speed of light level of photosynthesis: 6.0CO2 Level: 6.0 Light level of bubbles 1. Based on the data, what light color results in the fastest speed of photosynthesis? Suggest an explanation of these results. Colourless light results in the fastest speed of photosynthesis. The reason why I think this is true is because color can slow down how many bubbles there are. If the light is colorless, there would be nothing slowing down the bubbles' speed. Effect of the light level on the light color of photosynthesis: ColorlessCO2 level: 6.0 Light level 1.02.03.04.05.06.07.08.09.010.0 Number bubbles 2. Based on the data, what light level results in the fastest speed of photosynthesis? Suggest an explanation of these results. Light levels 8.9 and 10 produce the fastest speed of photosynthesis. The reason is because the plant is getting more light rather than dim light at lower levels. Since light mimics the sun, it would make sense if higher light levels could be faster photosynthesis. Effect of CO2 level on photosynthesis light color: Intensity of colourlessLight: 8.0 CO2 level 0.01.02.03.04.05.06.07.08.09.010.0 Number of bubbles 3. Based on the data, what CO2 levels result in the fastest rate of photosynthesis? Suggest an explanation of these results. CO2 Level 9.0 results in the fastest rate of photosynthesis. Plants need CO2 for fotsynthesize, so the more CO2 there is, the more bubbles are formed. 4. Based on simulation experiments, what factors may influence the rate of photosynthesis in a plant? How do you know that? The factors that can affect the rate of photosynthesis in a plant are light color, light intensity and CO2 levels. This is because these things are what a plant needs in order to photosynthesize. 5. Write the equation for photosynthesis (use the book or online resources if you don't know). CO2(gas) + 12 H2O(liquid) + photons → C6H12O6(aqueous) + 6 O2(gas) + 6 H2O (liquid) carbon dioxide + water + light energy → glucose + oxygen + water.6. What bubbles do you measure in this lab? Why do bubbles tell you how quickly photosynthesis happens? The bubbles are oxygen we measure. Because plants need CO2 to create oxygen, the more bubbles there are, the faster photosynthesis is.7. Why is it important to keep two variables constant (such as light levels and colors) while testing how a third variable (CO2 level) affects photosynthesis? It is important that two variables are constant because you don't have to worry about the other two variables while testing the third. Once you know the two variables, you place these two on the best results in order to get the best results for the third variable.8. What settings can you make in the simulator to the maximum extent of the Light Light Colourless, Light intensity: 8.0, CO2 Level 9.0. Thank you for participating! Thank you for participating! Name:

coal. The plant is then exposed to light of different intensity and color. Oxygen is measured in the number of bubbles produced by the plant. This simulator deals with three factors that affect the rate of photosynthesis. The availability of carbon dioxide, light intensity and light color can all be adjusted in the simulator to determine how each factor affects the rate of photosynthesis. Site: biologycorner.com/flash/waterweed.html affects the light color with the degree of photosynthesis set in the simulator 6.0 light level, and 6.0 CO2 level. Set the colors to complete the table. Light color number of bubbles (Light = 6,0 | CO2 = 6,0) 1. Based on the data, what light color results in the fastest speed of photosynthesis? Suggest an explanation of these results. Red blue green colorless effect light level photosynthesis set the simulator colorless light and CO2 level 6.0. To fill in the data table, make changes to the light level. Light level of bubbles (light = colourless | CO2 = 6,0) 2. Based on the data, what light level results in the fastest

speed of photosynthesis? Suggest an explanation of these results. 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 Develop an experiment to test how co2 levels affect the rate of photosynthesis. In the area below, you can create a data table that displays the collected data. Be sure to include information such as the color of the light, the intensity of the light, the level of CO2 and the amount of bubbles emitted. (Use previous experiments as a guide) Data Table < - Do not forget addresses / tags 2. Based on the data, what CO2 levels result in the fastest rate of photosynthesis? Suggest an explanation of these results. ANALYSIS 4 Based on simulation experiments, what factors can influence the rate of photosynthesis in a plant? How do you know that? 5. Write the equation for photosynthesis (use the book or online resources if you don't know). 6. What bubbles do you measure in this lab? Why do bubbles tell you how quickly photosynthesis happens? 7. Why is it important to keep two variables constant (e.g. light level and color) while testing how a third variable (CO2 level) affects photosynthesis? 8. What settings can you put in the simulator to the maximum degree of photosynthesis? Introduction: In this simulation, you are looking at the production of the like a plant plant This procedure can be achieved by placing elodea plants in water baking soda to make carbon. The plant is then exposed to light of different intensity and color. Oxygen is measured in the number of bubbles produced by the plant. This simulator deals with three factors that affect the rate of photosynthesis. The availability of carbon dioxide, light intensity and light color can all be adjusted in the simulator to determine how each factor affects the rate of photosynthesis. Site: the light color of the degree of photosynthesis set the simulator 6.0 light level, and 6.0 CO2 level. Set the colors to complete the table. Light color number of bubbles (Light = 6,0 | CO2 = 6,0) 1. Based on the data, what light color results in the fastest speed of photosynthesis? Suggest an explanation of these results. White light results in the fastest rate of photosynthesis, this is because chlorophyll absorbs blue and red light, white contains both spectra when it allows photosynthesis to run effectively. * Responses can vary on the desktop, simulation of some random elements Red 13 Blue 16 Green 5 Colorless 19 Affects the level of light photosynthesis set in the simulator colorless light and CO2 level 6.0. To fill in the data table, make changes to the light level. Light level of bubbles (light = colourless | CO2 = 6,0) 2. Based on the data, what light level results in the fastest speed of photosynthesis? Suggest an explanation of these results. As the intensity of light increases, the number of bubbles increases. Light is necessary to make water divided into hydrogen ions, the beginning of the light reaction. The answers vary on the desktop, the simulation has random elements 1.0 4 2.0 7 7.0 11 4.0 13 5.0 16 6.0 21 7.0 22 8.0 24 9.0 25 10.0 30 Effect of CO2 levels on photosynthesis An experiment should be investigated, how co2 levels affect the rate of photosynthesis. In the area below, you can create a data table that displays the collected data. Be sure to include information such as the color of the light, the intensity of the light, the level of CO2 and the amount of bubbles emitted. (Use previous experiments as a guide) Data table CO2 levels Number of bubbles (light intensity = 8, color = white) < - Do not forget titles / labels 2. Based on the data, what CO2 levels result in the fastest rate of photosynthesis? Suggest an explanation of these results. As it increases the level of carbon dioxide, the rate of photosynthesis also increases, this is because CO2 is used in the calving cycle to synthesize glucose. Levels quickly go up, but the dwindling down, is the limiting factor of light. The answers on the desktop vary, depending on which used for testing. 1.0 8 2.0 16 3.0 20 4.0 20 5.0 23 6.0 27 7.0 25 8.0 28 9.0 25 10.0 29 ANALYSIS 4. Based on simulation experiments, what factors may influence the the degree of photosynthesis in a plant? How do you know that? The intensity of light, the colour of the light and the level of carbon dioxide all influence the rate of photosynthesis 5. Write the equation for photosynthesis (use the book or online resources if you don't know). 6CO2 + 6H2O + Energy ® C6H12O6 + 6O2 6. What bubbles do you measure in this lab? Why do bubbles tell you how quickly photosynthesis happens? Bubbles are oxygen released during the easy reaction to photosynthesis. As the water splits in two, oxygen is produced as a waste product. 7. Why is it important to keep two variables constant (e.g. light level and color) while testing how a third variable (CO2 level) affects photosynthesis? If you change the levels of the other variables, you won't know if the increase (or decrease) was caused by the variable you're testing. 8. What settings can you put in the simulator to the maximum degree of photosynthesis? white light, intensity 1.0 and carbon dioxide level 1.0 produced 32 bubbles. Introduction: In this simulation, you are looking at the production of oxygen as a plant photosynthesizes. This procedure can be achieved by placing elodea plants in water baking soda to make carbon. The plant is then exposed to light of different intensity and color. Oxygen is measured in the number of bubbles produced by the plant. This simulator deals with three factors that affect the rate of photosynthesis. The availability of carbon dioxide, light intensity and light color can all be adjusted in the simulator to determine how each factor affects the rate of photosynthesis. Affects light color on the degree of photosynthesis: Set the simulator to 6.0 light levels, and 6.0 CO2 levels. Set the colors to complete the table. Light ColorRedBlueGreenColorlessBubbles No. 6.0 & CO2: 6.0)13 Bubbles15 Bubbles6 Bubbles22 Bubbles1. Based on the data, what light color results in the fastest speed of photosynthesis? Suggest an explanation of these results. > According to the data, colorless light results in the fastest rate of photosynthesis. The more bubbles we see, the more photosynthesis happens. Influence The Light Level Photosynthesis: Set the simulator colorless light to CO2 level 6.0. To fill in the data table, make changes to the light level. Light level1.02.03.04.05.06.07.08.09.010.0Bubbles No (Light: Colorless & CO2: 6.04811111721121242627302. Based on the data, what light level results in the fastest speed of photosynthesis? Suggest an explanation of these results. > Based on the data, 10.0 results in the fastest rate of photosynthesis. The more bubbles we see, the more photosynthesis happens. Effect of CO2 levels on photosynthesis: Develop an experiment to test how CO2 levels affect photosynthesis Use the area below to create a data table, which shows information you collect. Be sure to include information such as the color of the light, the intensity of the light, the level of CO2 and the amount of bubbles emitted. (Use previous experiments as a guide) 4. Based on simulation experiments, what factors may influence the rate of photosynthesis in a plant? How do you know?5. Write the equation for photosynthesis. 0.6 below an equation. What bubbles do you measure in this lab? Why do bubbles tell you how quickly photosynthesis happens? Additionally, the bubbles tell you how quickly photosynthesis happens depending on how much CO2, sugar, H2o, ect.7. Why is it important to keep the two variables constant (such as light levels and colors) while you're testing whether a third variable (CO2 level) affects photosynthesis?- It's important to maintain two variables constant, so you'll be able to get a more accurate response while you'll appreciate better the difference between experiments. 8. What settings can you put in the simulator to the maximum degree of photosynthesis- More CO2, as well as the amount of light gives me more results for maximum photosynthesis. Photosynthesis.