1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| D | R | | G | | B |
| pH will go down because photosynthesis is not occurring, but cellular respiration is causing a release of CO2 | pH will go up because photosynthesis is occurring causing CO2 deplete, cellular respiration will increase the amount of CO2 available, but there will be a net decrease of CO2. | | pH will go down because photosynthesis is not occurring, but cellular respiration is causing a release of CO2 | | pH will go up because photosynthesis is occurring causing CO2 deplete, cellular respiration will increase the amount of CO2 available, but there will be a net decrease of CO2. |
| 15 | | 20 | | 30 | |
| pH will go up because photosynthesis is occurring causing CO2 deplete, cellular respiration will increase the amount of CO2 available, but there will be a net decrease of CO2. pH will increase more relative to 20 and 30 | | pH will go up because photosynthesis is occurring causing CO2 deplete, cellular respiration will increase the amount of CO2 available, but there will be a net decrease of CO2. pH will increase more relative to 30 but less relative to 15 | | pH will go up because photosynthesis is occurring causing CO2 deplete, cellular respiration will increase the amount of CO2 available, but there will be a net decrease of CO2. pH will increase less relative to 20 and 30 | |

2. to prevent light from entering but to also keep it under the same conditions as the other cuvettes

3. blue, 15, 20, 30 because under those conditions, photosynthesis happened the most readily

4. to absorb light of different wavelengths

5. they are positively correlated because the absorbance changes based on the amount of CO2 because the indicator reads the amount of CO2