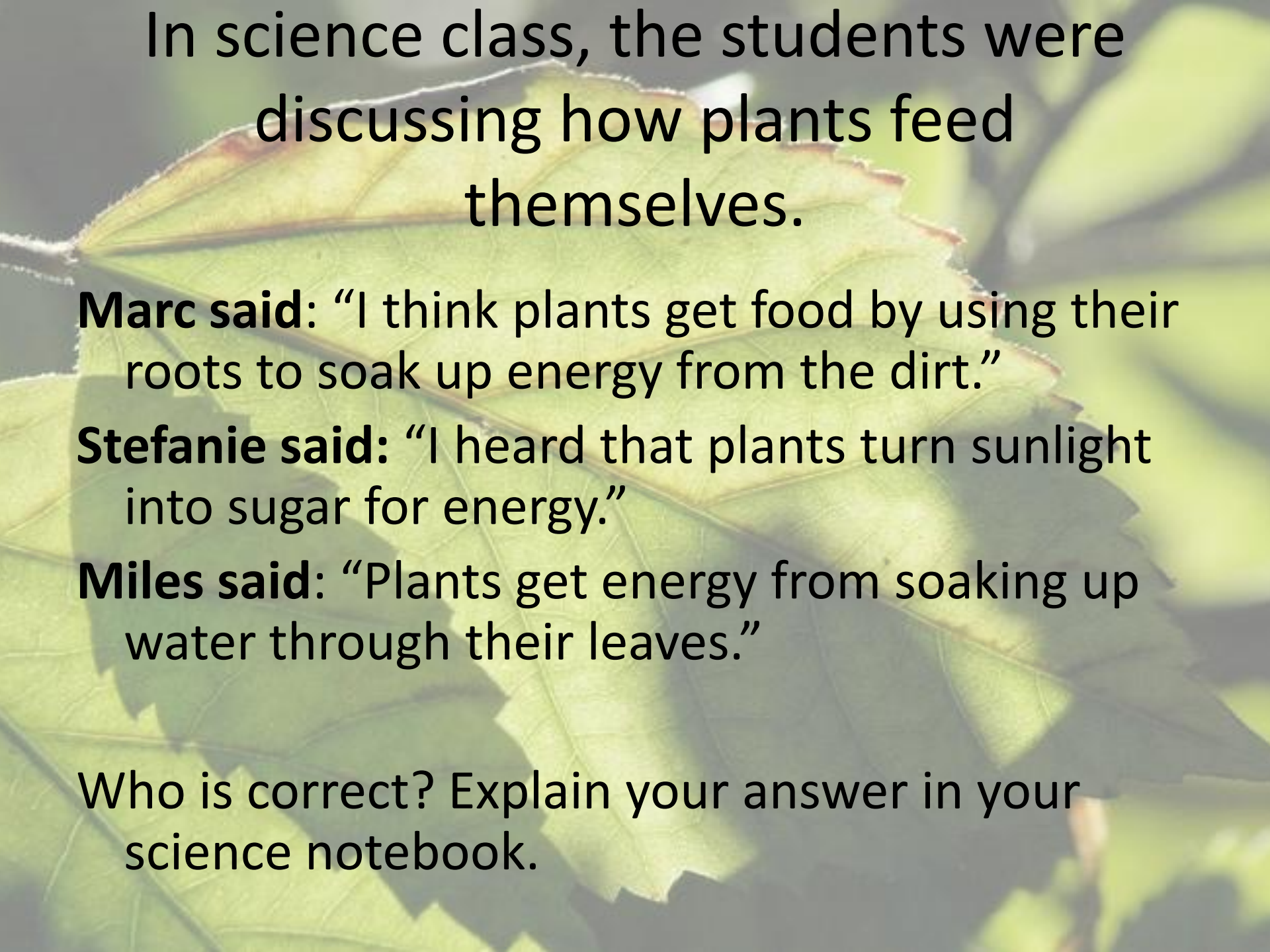




Photosynthesis



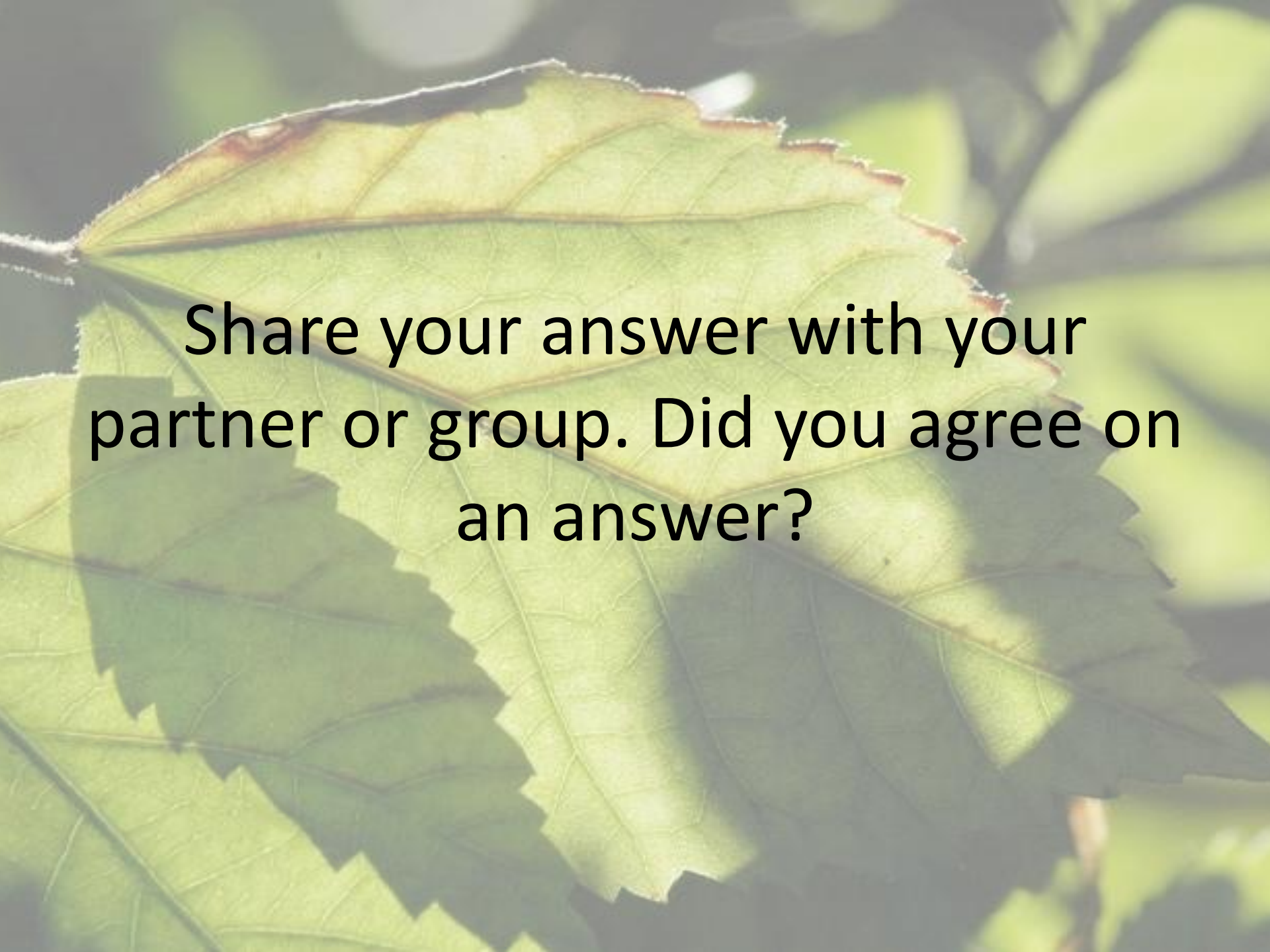
In science class, the students were discussing how plants feed themselves.

Marc said: “I think plants get food by using their roots to soak up energy from the dirt.”

Stefanie said: “I heard that plants turn sunlight into sugar for energy.”

Miles said: “Plants get energy from soaking up water through their leaves.”

Who is correct? Explain your answer in your science notebook.



Share your answer with your partner or group. Did you agree on an answer?

Exploration Data Chart

Location	Temperature before applying heat/light source	Temperature after applying heat/light source
Terrarium Soil		
Surface of aquarium water		
Bottom of aquarium water		

Exploration

Step 1: Take the temperature of the top of your terrarium's soil. Record it in your science notebook.

Step 2: Leaving the thermometer in the top of the terrarium soil, place the heat source over your terrarium a few inches from the surface of the soil.

Exploration

Step 3: While your soil is heating up, take the temperature of the surface of your aquarium. Then take the temperature of the bottom of your aquarium. Record this data in your science notebook.

Exploration

Step 4: Go back and check the temperature of your terrarium's soil after it has had a chance to sit under the heat source for several minutes. Record the temperature in your science notebook.

Exploration

Step 5: Take the temperature of the surface of the water, and then record it in your notebook.

Step 6: Submerge your thermometer down to the bottom of the aquarium. Record the temperature data in your science notebook.

Group Discussion

As a group, answer the following questions in discussion or in your science notebooks:

- How did the heat source make the soil and water warmer without touching them?
- What effect does the Sun's radiation have on plant growth?

Pause for Video: Photosynthesis Rap

Photosynthesis Rap

Warning : Extremely Funky

Sum-Up

- How do plants get food?
- Which organisms are dependent on the Sun's energy?

Group Discussion Question:

If plants need the Sun's heat and light energy to produce food, where would you predict algae growth would be greatest in a pond?



Final Concept Question

Answer in your science notebook.

On a field trip to the zoo, Jamari and James were outside the lion's pen. Jamari claimed the lion is a carnivore and is not dependent on the sun's light for energy since it only eats animals. How should James respond to Jamari's idea about how lions get energy?