



# Science: Plants and Wonder

## What if a unit on plants highlighted the interconnectedness of creation?

Chris's elementary class was looking at green plants and their need for air, water, and light to grow. Chris wanted his class to see how everything fit together and pointed toward a designer.

"I decided to change my introduction and began by playing 'Swap Shop,' where each group begins with an item on their desk. If it is something they do not want, they can swap it for another item that they want or need from my box of goodies at the front. The emphasis is on the fact that they have things that I need, and they want things that I have but did not need. I made sure I used this language throughout. I told them that this activity could help us to think about what followed.

"Then we looked at what different animals eat and followed that down the food chain to plants. For example: humans eat meat, cheese, and milk; these come from cattle, which in turn eat grass. We talked about what plants 'eat' and explored how plants use air, water, and sunlight to make food. In doing this, they give off oxygen, which they do not want but we and the animals need. In turn, we produce carbon dioxide when we breathe, something that we do not need but plants do. It's like a giant swap shop!

"We grew marigolds in containers and did experiments with light. We talked about how plants, animals, humans are dependent on each other, and that we therefore need to care for the plants. We talked about some ways in which human choices could damage the environment. We made some simple paper chains to show the interdependence. At the end, we had a brief time of reflection: I showed images of plants, people, and animals and asked students to think about how the connections came about and about what big questions we could ask concerning this."

## What's going on here?

Chris saw his science lesson as a way of demonstrating the interconnectedness and wonder of the world that, for him, pointed to a meaningful creation. He approached

this as a chance to provoke big questions.

Chris engaged students by involving them in an introductory activity that helped them focus their attention on coherence and led them to think about connections and, possibly, experience wonder. He also created time for reflection.

Chris reshaped his practice by structuring his lesson to draw attention to the story his science was telling and to the reactions it might evoke (the introduction and building to a moment of coherence; his lesson was consistent with acknowledging a creator, even though he did not discuss this.)

## What does this have to do with faith, hope, and love?

This discussion reflects the Christian faith in a creator God who made all things to fit together. Such insights enable spiritual development in children as they gradually realize more about the greatness of God and the wonder of the world. This can inspire hope and a sense of meaning as a consequence of understanding about an all-powerful, all-knowing creator God who holds all things together in the world that he created.

## What difference does it make?

Previously, Chris's class had grown marigolds, and they had all understood the importance of air, light, and water. But he had not highlighted the larger interconnectedness of the created world, so there was less emphasis on inviting wonder.

## Where could we go from here?

A focus on how things got to be the way they are and the use of sequences of questions to build up to insight into how intricately things fit together can be applied to various areas of teaching within and beyond the science curriculum. For various science topics, we can fruitfully ask what ways of structuring the learning sequence might be most likely to lead to wonder, rather than simply listing facts.

## Digging deeper

Belief in a good creator assures us that he has not created a meaningless universe. The pattern and complexity in the world resonate with faith in a designer who created with a purpose and gives life significance. An attitude of being challenged and changed by what we learn, as in this lesson, rather than just mastering information, means being humble. It involves asking what this says to us and to our community. Viewing learning in this way makes both knowledge and the learner active, drawing them into a relationship.

*If thou desire to profit, read with humility, simplicity, and faithfulness; nor even desire the repute of learning. Thomas à Kempis*

Chris challenged the sacred-secular divide, which is the idea that there is a secular world, and then there is religious belief, which is viewed as a private hobby that does not impact on public life or any parts of the curriculum except Bible class. Here, faith impacts science in an appropriate way. The attitude of dividing religion from the rest of life has led to the fragmentation of knowledge into parts often seen as unrelated to each other and God. This division of knowledge is a comparatively modern idea. The Bible sees things very differently. The entire world is God's and can reveal him (Psalm 24:1).

*Until about a century and a half ago, scientists and scholars commonly assumed that knowledge formed a coherent whole; more precisely, they assumed that all parts of knowledge ultimately could be connected because every area of knowledge focused on some aspect of one single divine creation. J. Turner*



**Previous:** Seeing Connections  
What if growing beans helped stud...

**Next:** Magnets and Wonder  
What if a lesson on magnetism ins...



