Lichen Study and Course Review – Day 4

Biology

Today, we are going to design some experiments with lichens to see what types of dyes we can make. Many of the dyes created from lichens require great amounts of time or substances that we won't be using in the classroom (for example, highly concentrated acids or urine). However, there are lots of different ways we can investigate lichen dyes with common household chemicals (ammonia, for example) that will yield visible results in a short amount of time.

Your goal for today is to work with a partner to research one practical way of investigating possible dyes that could be made with our lichens. You might find existing instructions that other people have found to be successful with one of our lichens. More likely, you will find a method that has been used to extract dyes from other lichens – and then you can try it on ours.

In general, the experimentation will be relatively open and unstructured. However, there are a few guidelines you should follow:

1. Never mix chemicals without checking with your instructor first. For example, mixing ammonia and bleach creates a poisonous gas that is very dangerous.
2. You'll need to use proper safety equipment – googles are required and aprons are recommended. If you heat any solutions, you should NOT wear gloves (they can ignite and cause burns). Otherwise, wear gloves when using irritants such as ammonia or bleach.
3. All of you should try different experiments – once you have an idea, run it past your instructor to determine if a) it's safe and practical and b) it's unique

Once you have come up with an idea, type up your idea in a Google Doc (you can work with your partner and submit one document). You should have a list of steps that are clear and the goal of your experiment should be explained, but the overall document can be brief. Your document should have a detailed materials list for your instructor. Make sure you put both your name and your partner's name on the document and turn it in through Showbie.