

BIOLOGY WITH DR VALERIA FAGGIOLI AND DR MAYRA OSORIO

TALKING POINTS

KNOWLEDGE:

1. What are the three specific challenges that CABANA has been established to help overcome? Which of these does Valeria and Mayra's research fall under?

COMPREHENSION:

2. Why is it important to understand the impact of human activity on soil bacterial and fungal communities?
3. Why is Cacao cultivation important in Latin America?
4. Why is Cacao cultivation suffering at present?

APPLICATION:

5. How will Mayra and Valeria's findings help contribute solutions to the problem of sustainable food production in the future? For example, how might their results inform farming practices?

ANALYSIS:

6. What motivates Mayra and Valeria to conduct the research they do?
7. What advantages does the MGnify tool offer a researcher like Valeria?
8. What are some of the challenges faced by Mayra when she is conducting field work?

EVALUATION:

9. What has reading about Mayra and Valeria's careers taught you about what it is like to be a researcher? Which aspects of their work appeals to you the most and why?
10. The world – and the growing global population that needs feeding – relies on different types of crops. We know Cacao cultivation is hugely important in Latin America, but what are the staple crops elsewhere in the world, and why are they so important?

ACTIVITY

Imagine you are a researcher in the CABANA project. Like Mayra and Valeria, you are focusing on sustainable food production. Consider the following questions:

- In which country will you conduct your investigation?
- Which food crop will you study and why?
- How do you think this crop is affected by climate change?
- How could this crop be affected further in the future?
- What conditions does this crop need to thrive?
- Can you identify a problem your chosen crop might be facing? To what extent is its cultivation impacted by human activities?
- What do you think could be a solution to this problem and how would you go about investigating it?
- What equipment would you need to conduct this research?
- Who would you need to collaborate with to make your study a success?

These are not easy questions to answer; devising a research project is very complex. Refer back to Mayra and Valeria's article to remind yourself how they approached their research.

To extend your ideas, you could:

- Research programmes being conducted around the world (see the Crop Trust link below and see if any are related to the issues you have considered)
- Create a PowerPoint persuading your funder to support your proposed project
- Devise an experiment to test an aspect of the crop you want to investigate.

MORE RESOURCES

Read more about the CABANA project: www.cabana.online. This video will also help explain the project in a nutshell: www.youtube.com/watch?time_continue=1&v=tUJ-Q4ODGbs&feature=emb_logo&ab_channel=EuropeanBioinformaticsInstitute-EMBL-EBI

CGIAR, a CABANA partner, is aiming to “transform food, land and water systems in a climate crisis” and has a worldwide network of research labs. Learn more: www.cgiar.org

The Crop Trust supports lots of research around the world, including in Latin America: www.croptrust.org/our-mission/cropsincolor/around-world/latin-america/

The Microbiology Society is always an excellent resource for people interested in pursuing a career in the field: microbiologysociety.org/careers.html

The National Geographic website has a useful section on food crops around the world: www.nationalgeographic.org/maps/wbt-staple-food-crops-world