BIOL 1123 SPRING 2023

TEAMWORK PROJECT

Teamwork Project Outcome

- Create an infographic that illustrates the story of your eukaryotic biological organism of choice, based on its phenotypes of physiological, performance, and fitness levels can respond to climate change.
- You will research the biological needs of your eukaryotic organism, the optimal environment conditions for your organism, and then predicts potential changes in the environment and the effects that might have on your organisms three biological dictates: 1) be successfully "born", 2) grow from infant stages to reproductive maturity, and 3) successfully reproduce viable offspring.

Academic Learning Objectives:

- Apply concepts of eukaryotic homeostasis, multicellularity, and biological levels, by exploring how these processes may predict an organisms response to climate change.
- Learning and applying creativity, biological knowledge, and skill by creating an infographic.

Core Curriculum Assessment Criteria: **TEAMWORK**

- The core assessment criteria will be used by your instructor to gauge you on your interactions with your team.
- During the development phase of this project, you and your team mates will receive google forms to provide feedback to your instructor regarding the following TEAMWORK assessment criteria:
    - Does the student foster a constructive team climate through verbal and nonverbal communication, assistance, encouragement, and enthusiasm? (CA #8)
    - In addition to participating reliably in team meetings, does the student offer suggestions during those meetings that build on the ideas of others? (CA #5)
    - Does the individual resolve conflict by respectfully offering alternative perspectives, engaging in active listening, and directly addressing destructive comments/behaviors of others. (CA #9)
    - Does the individual facilitate contributions by other team members? (Examples of facilitation include constructively building on their ideas and inviting the perspectives of those who are quietly sitting on the sidelines). (CA #7)
- At the end of the semester, your instructor will send each team member a google form to query you about each of your team members regarding the 4 above criteria. This will not be shared with your team members – it will be private between you and your instructor.
- All google forms and queries will be a part of your grade for this teamwork project.

Academic Requirements:

As part of a 5-person team, your team will create an **infographic** that will incorporate the following information:

1. What is the scientific name and the common name of your organism of choice?
2. Where can this organism be found (be specific)
3. What is the natural habitat of your organism?
4. What are the "normal" optimal environmental conditions of your organism?
5. What are the biological requirements for your organism?
    a. This should include things like food source(s), water source, shelter, reproductive requirements, family rearing requirements, etc.
    b. What does your organism require to begin their existence healthy and mature into a healthy reproductive adult organism that can produce live-healthy offspring.
    c. How does your organism acquire the life sustaining necessary resources?
    d. What is the ideal temperature for optimal survival for your organism within the ideal habitat. Is it different for the offspring as they grow and mature?
    e. How does your organism reproduce – what are the requirements – and do the "parents" raise the offspring?
6. Why should "we" care? Why does the information you are presenting matter?
7. **With these items in mind – as you do your research – your primary objective is to assess how your organism may be able to adapt and respond to climate change with regards to the questions posed above.**
    a. Example: What if the temperature of water for your fish to reproduce must be within 80-85^{o}F – what might happen if the temperature of the water in that habitat does not get warm enough – or gets too warm? How would this affect the population of your fish in their preferred environment? Which factors in the environment can affect the fish population is a good place to start researching.
8. You may use any reputable website for information – but you must CITE your sources. Wikipedia is not valid cited source – but it may be a good place to start looking for ideas and can even point you to resources (look at the citations on the Wikipedia page).
9. You **must** use at least 3 peer reviewed articles (go ask the TWU librarians for help – they LOVE to help our students!)
10. Citations should be submitted on a separate piece of paper and must be in MLA format in 12-point Times New Roman font.

This paper should be helpful to get you started! The article is attached to this pdf as an attachment. You should be to see it on the left hand menu in Adobe under the paperclip icon.


Integrative and Comparative Biology

INVITED PERSPECTIVES

Leveraging Organismal Biology to Forecast the Effects of Climate Change

Here is a link if the document doesn't open for you: Leveraging Organismal Biology to Forecast the Effects of Climate Change

Formatting Requirements:

- Your infographic must be graphic in nature (no hand drawn) and not text heavy
- Your infographic should be colorful – but not messy or overwhelming
- Your infographic should be formatted to fit/print on a legal size-piece of paper (8.5 x 14)
- Your information should be able to be displayed on the screens in the classroom and not have to be zoomed in or out for the presentation.
    - Keep this in mind when thinking about the format/file extension you may be using. We have to be able to open it and view it in a TWU classroom
- You can use whatever software you wish to use to create your infographic, but your final presentation submitted on Canvas for grading should be in a pdf form. Canva, Powerpoint, Visio and Adobe will all work, but you may use whatever you choose. Just remember it has to be "presented" in the TWU classrooms so if it requires special software to VIEW – you will need to keep this in mind.
- You may NOT have flashing lights or other "animation" as this may be difficult and detrimental to photosensitive classmates.

Assignment Info and Due Dates:

- Starting in Week 2 of the Spring 2023 semester you will be assigned to your team, you will determine who will fulfil which role in the team, and you will begin planning your project. You will need to work and meet outside of class in order to fulfill and meet these project requirements and deadlines.
- **DUE DATE FOR THE FINAL PROJECT: Sunday April 30th at 5PM.**

- During the last week of the semester, you will present your research and your infographic to the class.
- **This project is worth 75 points.** Your grade will be determined by your contribution to the project as part of a team , your contribution to the information presented on the infographic, your contribution to the information presented during the in-class presentation. 20 points of this grade will be determined by your team members based on their responses to the google form teamwork criteria mentioned above in the core curriculum assessment section. So be a good team member, participate responsibly, respectfully and graciously. Having a problem with a teammate? Email me immediately!

Never made an infographic before? Here are some helpful websites.

What is an Infographic? Examples, Templates and Design Tips

What is an Infographic?

Creating and Infographic

Do not wait to start this project – it will sneak up on you – get your team on board, get your organism chosen, and get a schedule set to meet and complete the research. Get your team work roles defined and project responsibilities assigned. Meet regularly to share ideas and discuss progress.

Before you start teamwork

You should begin by assigning the following team roles and responsibilities. See below. You will be asked by your instructor which members of your teams are fulfilling which roles – so don't just gloss over this. It is important and relevant when you complete your education and move out into the working world. It may be that you have 'partnerships' for some of these roles – but be clear about the expectations and responsibilities for each team member.

Before you start teamwork

Together with your team:

1. On a piece of paper, draw a circle split into five segments with one of the Team Roles (**leader, challenger, doer, thinker, supporter – SEE BELOW FOR WHAT THESE ARE**) represented in each segment.

2. Ask each team member to enter their name in the segment or segments that correspond to the role they find they usually perform in a team.
3. Once team members' names have been entered, analyze the circle and discuss the role descriptions together. Where are your team's strengths and potential weaknesses?
4. Ask everyone to come up with an action point, based on their discussions, which will enable the team to increase its effectiveness.

This activity also highlights any skill gaps or surpluses that your group hadn't anticipated. If either of these is the case, you will need to be proactive about managing that situation. For instance, who might be willing to fill in any skills gaps? What if there are two people suited to the same role?

1. LEADER**: makes sure team has clear objectives and members are engaged**
Leaders have good awareness about what skills their group needs to develop, they are good at planning and prioritizing tasks needed to complete work. They are organized and focus on time management, and can set realistic targets. They have a good sense of when a problem is 'solved', and pay attention to detail in checking and finalizing work.

2. CHALLENGER**: questions effectiveness and drives for results**
Challengers can look at problems and see more than one solution. They are able to explain ideas and counter-ideas clearly to people, and are always thinking about how to do things better.

3. DOER**: encourages progress and takes on practical jobs**
Doer's deal well with distractions and are focused workers. They know where to go to find information and are proactive about doing so. They are task oriented and ask for advice or input when they are stuck on a problem.

4. THINKER**: produces ideas and thinks through those proposed by others**
Thinkers are good at selecting the information they need to solve problems or complete tasks. They are logical and can break down tasks into steps and put information in order. When solutions to problems don't work, they try to find out why and approach the problem from another direction.

5. SUPPORTER**: eases tension and promotes harmony**
Supporters work well with other people and listen to their suggestions. They like to check that they have understood problems, and suggest different ways of solving them in a team. They stay calm when there is disagreement or conflict. They can follow instructions to get tasks done and see how these contribute to overall team goals.

After teamwork is completed

Reflecting individually on the teamwork you have completed:

1. Which description do you think best describes your individual role or roles in the teamwork during this task?
2. Which roles did other individual team members play?
3. What were your team's strengths and weaknesses? What (or who) do you think contributed to your team's overall effectiveness?
4. What did you learn from this team task (about yourself, and about teamwork generally) that you can use in future teamwork?

If you have questions, need assistance, or want me to attend one of your group work sessions, please email me at jwojtaszek@twu.edu. Don't wait for this either!! Ask early and ask often!