# DP unit planner 1

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| **Teacher(s)** | Adam Lerch & Niko Kaikkonen | **Subject group and course** | Group IV Biology | | |
| **Course part and topic** | Topics 3 (SL) & 10 (HL) | **SL or HL/Year 1 or 2** | 1 | **Dates** | Terms 4 & 5 |
| **Unit description and texts** | | **DP assessment(s) for unit** | | | |
| Biology Course Companion (Allott & Mindorff 2014) | |  | | | |

***INQUIRY: establishing the purpose of the unit***

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| **Transfer goals**  *List here one to three big, overarching, long-term goals for this unit. Transfer goals are the major goals that ask students to “transfer” or apply, their knowledge, skills, and concepts at the end of the unit under new/different circumstances, and on their own without scaffolding from the teacher.* |
| The major long-term goal is to achieve a deepened understanding of genes: their chemical composition has already been covered. Now it is time to observe through experiments and data how they are inherited, expressed, changed, and modified through technology. |

***ACTION: teaching and learning through inquiry***

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| **Content/skills/concepts—essential understandings** | | **Learning process**  *Check the boxes for any pedagogical approaches used during the unit. Aim for a variety of approaches to help facilitate learning.* | |
| Students will know the following content:  All understandings as shown in 3.1-3.5 and 10.1-10.3  Students will develop the following skills:  --Use and application of karyotypes through simulations  --Using databases to compare genes  Students will grasp the following concepts:  Identity: Our genes make us who we are, but to what extent?  Change: Over time, genes and genetic distribution may greatly change.  Culture: Are some cultures genetically determined? Or, what are the connections between genes and cultures?  Transformation: How meiosis brings about incredible change in genetic combinations and physical traits. | | **Learning experiences and strategies/planning for self-supporting learning:**  Lecture  Socratic seminar  Small group/pair work  PowerPoint lecture/notes  Individual presentations  Group presentations  Student lecture/leading  Interdisciplinary learning  Details:  Other/s: | |
| **Formative assessment:**  **Quizzes throughout the term.**  **Assessment at either end of Term 4 or 5.** | |
| **Summative assessment:**  **Assessment on Papers 1 & 2** | |
| Differentiation:  Affirm identity—build self-esteem  Value prior knowledge  Scaffold learning  Extend learning  Details: | |
| **Approaches to learning (ATL)**  *Check the boxes for any explicit approaches to learning connections made during the unit. For more information on ATL, please see* [*the guide*](http://ibpublishing.ibo.org/dpatl/guide.html)*.* | | | |
| Thinking  Social  Communication  Self-management  Research  Details: | | | |
| **Language and learning**  *Check the boxes for any explicit language and learning connections made during the unit. For more information on the IB’s approach to language and learning, please see* [*the guide*](http://ibpublishing.ibo.org/dpatl/guide.html)*.* | **TOK connections**  *Check the boxes for any explicit TOK connections made during the unit* | | **CAS connections**  *Check the boxes for any explicit CAS connections. If you check any of the boxes, provide a brief note in the “details” section explaining how students engaged in CAS for this unit.* |
| Activating background knowledge  Scaffolding for new learning  Acquisition of new learning through practice  Demonstrating proficiency  Details: Candidates already know quite a lot about DNA. These topics show DNA through time and provide a broader view of inheritance. Gel electrophoresis allows for new learning in a practical sense. | Personal and shared knowledge  Ways of knowing  Areas of knowledge  The knowledge framework  Details: Knowledge about genes includes knowledge about ourselves. | | Creativity  Activity  Service  Details: |
| **Resources**  *List and attach (if applicable) any resources used in this unit* | | | |
| **InThinking Biology**  **IB Questionbank: Biology**  **Biology Course Companion**  **Pedanet** | | | |

***Stage 3: Reflection—considering the planning, process and impact of the inquiry***

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| **What worked well**  *List the portions of the unit (content, assessment, planning) that were successful* | **What didn’t work well**  *List the portions of the unit (content, assessment, planning) that were not as successful as hoped* | **Notes/changes/suggestions:**  *List any notes, suggestions, or considerations for the future teaching of this unit* |
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