

## Pre-IB Biology Course

Topics include: Animal and plant cells, biological molecules, genetic, photosynthesis, respiration, evolution and ecology

Content Overview/Topics:

Session	Week Commencing	Topic	Comment & Resources
1	May 3, 2022	Cell structure and function	Prokaryotic and Eukaryotic cells
2	May 3, 2022	The cell membrane and transport	Plasma membrane structure, diffusion, osmosis and active transport
3	May 10, 2022	Cell division	Mitosis
4	May 10, 2022	Carbohydrates and lipids	Glucose, Glycogen and Cellulose + Triglycerides
5	May 17, 2022	Proteins and enzymes	Amino acids and Enzymes
6	May 17, 2022	Nucleic acids	DNA structure; Protein synthesis
7	May 24, 2022	Photosynthesis	Factors affecting photosynthesis Practical activity using online simulations
8	May 24, 2022	Respiration	Aerobic and anaerobic and fermentation
9	May 31, 2022	The digestive system	Structure, microvilli and digestive enzymes
10	May 31, 2022	Blood and circulation	Structure of the heart and blood
11	June 7, 2022	Breathing and respiration	Structure of the lungs and adaptations of the alveoli
12	June 7, 2022	Reproduction and meiosis	Meiosis
13	June 14, 2022	Inheritance	Genetic disorders and Genetic crosses
14	June 14, 2022	Evolution	Natural selection
15	June 21, 2022	Climate change	Greenhouse effect and Correlation and causation
16	June 21, 2022	Test	MCQ questions + Structured questions

### Teacher:

**Jurgita Makuškaitė, International Baccalaureate Programme Biology Teacher** | Jurgita graduated from Vilnius University with a master's degree in Environmental Sciences and Ecology. She has also completed PGCE (Postgraduate Certificate in Education) studies at Middlesex University and received a qualified teacher's status (QTS) in the United Kingdom. Jurgita has taught Biology, Chemistry, and Physics GCSE in Secondary Schools in London for the past three years. She gained invaluable international experience in teaching English National Curriculum for Science. Jurgita enjoys sharing her knowledge and skills with students and believes that perseverance, open-mindedness, positivity, and resilience are among the most important values needed for the students to be prepared for the challenges of this precious century. Jurgita believes that "Teachers can open the door, but you must enter it yourself."