**Guidelines to preparation of IWS for their implementation**

**by discipline "Biodiversity of Plants and Animals"**

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| --- | --- | --- |
| **N** | **Name of SIW** | **Number of week** |
| 1 | Diversity of algae, their value, utilisation. | **3** |
| 2 | Diversity of seedless vascular plants , their value, utilization.. | **5** |
| 3 | Medicinal, tanning, poisonous, fodder. plants. Their value. | **6** |
| 4 | Disease caused by parasitic protozoa/ Biology of parasitic protozoa, life cycle. Radiate Animals. Cnidaria (Taxonomy. Adaptive diversification. Ecological significance. Coral reefs).  Insects and Human Welfare / Colonies in insects.. | **8** |
| 5 | Shellfish – types and features | **10** |
| 6 | Dicsussing ecology of sharks, their benefits and conservation. | **11** |
| 7 | Fishes as object of biotechnology.  Poisonous fishes and amphibians. Biodiversity of reptilians, their importance in human life.. | **12** |
| 8 | Diversity of birds. | **14** |

The preparation of the IWS takes place in the form of a presentation. Each presentation must have at least 12 slides. The first is the title of the presentation, the name and details of who did it, the last is links to sources.

The ratio of the visual to the text should not exceed 1: 2

**Main sources**

1. Simpson M.G. Plant Systematics. Academic Press. – 2010. – 752 p.
2. Raven P., Evert R.F. , Eichhorn S.E. Biology of Plants. By W. H. Freeman and Company 2013. – 864 p.

3. Semple J.C. Flowering Plants Laboratory Manual (A guide to the morphology of flowers). – 2016. – 79 p.

4. Догадина Т. В., Горбулин О. С., Громакова А. Б. Ботаника: Низшие растения (= *Thallobionta, Atracheophyta, Cryptogamen*). - Х. : ХНУ имени В. Н. Каразина, 2014. – 150 с.

5. Integrated principles of zoology / Cleveland P. Hickman, Jr. 14th ed. 2008. /Available as e-book/.

6. Biology 8th ed by Campbell and Reece – 5th ed.- 2008 /available in pdf/. 1.

7. Наумов Н.П., Карташев Н.Н. Зоология позвоночных. М., 1979, ч.1-2.

8. Брикетти П. 2004. Птицы. Справочник. М.: 1-319

9. Константинов В.М., Наумов С.П., Шаталова С.П. Зоология позвоночных. М.: 2000: 1-495

10. Константинов В.М. (ред.). Лабораторный практикум по зоологии позвоночных. М.: 2001: 1-272

Internet resources:

11. Zoology Books <http://www.freebookcentre.net/Biology/Zoology-Books.html>

12. <http://www.austincc.edu/sziser/Biol%201413/zoollec&ho.html>

13. <http://www.pdfdrive.com/biology-zoology-textbooks-online-e15316820.html>

1. <http://sunny.moorparkcollege.edu/~econnolly/>

**Available online:** Additional training materials and documentation for botany used for homework and projects will be available on your page on univer.kaznu.kz in EMCD