

Appendix C: Workplace (ENGLISH)

Question W1: What best describes your company / organisation?

- (1) Public administration
- (2) Private sector
- (3) Industry
- (4) Nature-based industry
- (5) Independent research centre
- (6) Education sector
- (7) Higher education sector
- (8) Non-governmental organization
- (9) Other _____

Question W2: Do you work in a small, medium or large company / organisation?

- (1) Small (fewer than 20 employees)
- (2) Medium (20-100 employees)
- (3) Large (more than 100 employees)

Question W3: Approximately what percentage of employees in the company / organisation are graduates in biology (biology is interpreted broadly, including veterinary medicine, natural resource management, etc.)

Question W4: What kind of position do you have? You may select multiple fields

- (1) Management / Leadership
- (2) Research / scientific employee
- (3) Teaching / presentation
- (4) Administration / procedural
- (5) Technician / engineer
- (6) Sales
- (7) Other: _____

Question W5: Have you studied biology at the college or university level?

- (1) No, I have not studied biology
- (2) Yes, individual courses in biology
- (3) Yes, Bachelor of Science in biology
- (4) Yes, Master of Science in biology
- (5) Yes, Ph.D. in biology

Question W6: When your company / organisation hires new people, does the company particularly look for candidates who are biologists or who have biological competencies?

- (1) Yes, the company adverts jobs especially for biologists
- (2) No, the company does not announce positions specifically for biologists, but biologists may be relevant applicants

Question W7: What sort of tasks do biologists perform in your company / organisation? Tick as many as appropriate

- (1) Data processing, analysis of data

- (2) Technical / laboratory work
- (3) Taxonomy and species knowledge
- (4) Teaching / presentation
- (5) Casework and investigation
- (6) Research
- (7) Management
- (8) Sale
- (9) Other

Question W8: Are there other tasks biologists perform at your company / business?

Question W9: How important are the following for your company / organisation when hiring biologists?

1. Very unimportant 2. Unimportant 3. Neutral 4. Important 5. Very important Don't know

A: Which institution the candidate graduated from

- (1) (2) (3) (4) (5) (6)

B: Grades on the diploma

- (1) (2) (3) (4) (5) (6)

	1. Very unimportant	2. Unimportant	3. Neutral	4. Important	5. Very important	Don't know
C: Work experience / training	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>
D: Level of education (bachelor, master, Ph.D)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>
E: Offices and other voluntary activity	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>
F: Expertise in one or more biological fields	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>
G: General scientific education	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>

Question W10: How important is competencies in the areas given below for your company / organisation when hiring biological staff?

	1. Very unimportant	2. Unimportant	3. Neutral	4. Important	5. Very important
A: Application of biological methods	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
B: Theoretical biological knowledge	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
C: Ability to use biological knowledge in new contexts	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

Question W11: How important is it that biologists at your workplace have the following biological knowledge?

	1. Very unimportant	2. Unimportant	3. Neutral	4. Important	5. Very important
A: Theory of evolution and natural history	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
B: Ecological processes and patterns from the individual to the ecosystem level	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
C: Matter and energy cycles in ecosystems	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
D: Biological systems' structure and function	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
E: Flow, exchange and storage of information, energy, and nutrition at the molecular level	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
F: The scientific process	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
G: Experience with modelling, simulation and data processing	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
H: Species identification / taxonomy	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

1. Very unimportant 2. Unimportant 3. Neutral 4. Important 5. Very important

I: Natural science's role
in society

(1) (2) (3) (4) (5)

Question W12: How important is it that biologists in your company / organisation master the practical skills in the list below?

1. Very unimportant 2. Unimportant 3. Neutral 4. Important 5. Very important

A: General laboratory
skills such as
microscopy, pipetting,
etc.

(1) (2) (3) (4) (5)

B: Subject-specific
laboratory methods

(1) (2) (3) (4) (5)

C: Biological methods
used in the field or on
cruises

(1) (2) (3) (4) (5)

D: Practical skills in data
processing / software /
statistics

(1) (2) (3) (4) (5)

Question W13: How important are the following general competencies for your company / organisation when hiring biological staff?

	1. Very unimportant	2. Unimportant	3. Neutral	4. Important	5. Very important
A: Presentation skills and communication	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
B: Collaboration abilities	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
C: Independence	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
D: Critical thinking and problem solving	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
E: Literacy	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
F: Learning ability	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
G: Numerical skills	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

Question W14: How important is discipline-specific biological knowledge relative to general academic and transferable skills for your company / organisation?

- (1) Biological expertise is more important
- (2) Both are equally important
- (3) General academic and transferable skills are more important

Question W15: To what degree does your company / organisation expect biologists to have the following interdisciplinary competencies?

	1. Very little	2. Quite little	3. Neutral	4. Quite much	5. Very much
A: Economy	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

	1. Very little	2. Quite little	3. Neutral	4. Quite much	5. Very much
B: Legal expertise	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
C: Management	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
D: IT knowledge / programming	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
E: Project management and planning	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
F: Pedagogical competence	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
G: Foreign language skills	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
H: Other natural sciences	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
I: Social science	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

Question W16: If the following interdisciplinary competencies are important for biologists in your company / organisation, what is the most important source of this knowledge?

	Education	In-service courses	Work experience	Other	Not important for our company / organisation
A: Economy	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
B: Legal expertise	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
C: Management	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
D: IT knowledge / programming	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

	Education	In-service courses	Work experience	Other	Not important for our company / organisation
E: Project management and planning	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
F: Pedagogical competence	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
G: Foreign language skills	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
H: Other natural sciences	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
I: Social science	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

Question W17: Are there any other skills or competencies that are important for biological staff to have or learn in your company / organisation?

Question W18: What competencies do newly hired biologists have to work hardest on to master in your workplace?

Question W19: Mention briefly what you think are the most important competencies a biologist can contribute with in your company / organisation in terms of

A: Knowledge

B: Skills

C: General competence

Question W20: Does your company / organisation collaborate with a biology education at a university or a college in any of the following ways?

	Yes	No	Don't know
A: Biology students write / have written reports / essays related to our company / organisation	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>
B: Research collaboration with biology students or academic staff	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>
C: Contributed to the teaching in biology courses	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>
D: Company / organisation presentation (e.g. career's advice)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>
E: Biology students have or have had internship / workplace practice with us	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>

Question W21: Has your company / organisation collaborated with a biological educational institution in other ways?

Question W22: We are interested in knowing more about your thoughts regarding internship / workplace practice as part of a biology education.

Please respond regardless of whether or not you have experience with students in internship / workplace practice.

1. Strongly disagree 2. Disagree 3. Slightly disagree 4. Neutral 5. Slightly agree 6. Agree 7. Strongly agree

A: Practice will make students better prepared to meet the labour market

(1) (2) (3) (4) (5) (6) (7)

B: Practice will provide students with important skills that they cannot acquire at the university / college

(1) (2) (3) (4) (5) (6) (7)

C: Practice will give students a better and more relevant

(1) (2) (3) (4) (5) (6) (7)

1. Strongly disagree 2. Disagree 3. Slightly disagree 4. Neutral 5. Slightly agree 6. Agree 7. Strongly agree

understanding of their
theoretical knowledge

D: Practice will give

students more
motivation to learn
biology

(1) (2) (3) (4) (5) (6) (7)

E: Practice during the
biology education will
come at the expense
of other important
learning at the
university / college

(1) (2) (3) (4) (5) (6) (7)

Question W23: To what extent do you agree with the following statements?

Please respond regardless of whether or not you have experience with students in internship / workplace practice.

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

A: A workplace practice
collaboration with a
college / university will
contribute with new
knowledge and
competence to the

(1) (2) (3) (4) (5)

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

company /
organisation

B: Students in workplace

practice is wrong use (1) (2) (3) (4) (5)
of resources

C: Students in workplace

practice allows us to (1) (2) (3) (4) (5)
liaise with potential
employees

Question W24: Do you have other comments about having biology students in workplace practice?

Question W25: Is your company / organisation interested in providing input to the education of biologists?

- (1) Yes
- (2) No
- (3) Don't know

Question W26: If you answered yes to the previous question, what types of input would your company / organisation wish to contribute with?

Question W27: Does your company / organisation hire biology students for summer jobs or part time jobs?

- (1) Yes
- (2) No
- (3) Don't know