General Risk Assessment
Form RA1

(Refer to Notes for Guidance before completing this form)

School Assessment No:	R(D)SVS/The Roslin Institute
Title of Activity:	Farm Detectives workshop
Location(s), Date and Time of Work:	Easter Bush Science Outreach Centre, University of Edinburgh, Easter Bus, EH25 9RG. Please see separate EBSOC visit RA form for dates and times.

Brief Description of Work:

A hands-on workshop, with simulated investigations into an outbreak of bacterial disease on a farm, for P6 to S3 pupils. Participants work in small groups on a series of interactive activities and are supervised at all times by staff and students from the University of Edinburgh and staff/adult helpers from their school.

Workshop Activities

Bacteria up close: Examine fixed bacterial slides using light microscopes, learn about bacterial cell structure and observe and identify different types of bacteria.
Outbreak challenge: Work in teams to solve clues and work out the source of an on-farm Salmonella outbreak.
Bacterial Cross-Contamination: Using non-toxic UV lotion and UV powder with blacklight torches, explore how germs can spread between people and objects.
Analysis of Swab my School experiment: Analysis of agar plates that were swabbed the week before in school and grown for a week in the classroom (pre-visit experiment)
Bacterial division game: Using counters and dice play a game to explore bacterial growth.
Salmonella serotyping: Carry out a mock serotyping activity to identify the type of Salmonella found in the farm outbreak.

Hazard Identification:

Hazard(s)	**Present Risk Evaluation** L/M/H	**Control Measures** (i.e. alternative work methods / mechanical aids / engineering controls etc.)	**Risk Evaluation after control** L/M/H
Bacteria up close: Sharps hazard if microscope slides are broken.	L	Microscope use will be supervised at all times. Spare slides will be kept out of reach of participants. Any broken slides will be cleared up immediately by staff and disposed of safely.	L
Bacteria up close: Crush injuries if microscopes pulled off benches.	L	Microscope use will be supervised at all times. Any leads/wires will be tidied away behind microscope to reduce the risk of them being pulled.	L

Outbreak challenge: Paper-based activity, no hazards.	N/A	N/A	N/A
Analysis of Swab my School experiment: Potential Biohazard	M	Teachers will be given clear instructions before the visit along with a list of hazards and advice on how to reduce the necessary risks and if the school should carry out a risk assessment for the investigation as part of a pack sent before the workshop. The plates will be taped with two small pieces of tape and never opened after the initial swab. The plates will all be collected and disposed of by a member of the EBSOC staff through the biohazard waste management system.	L
Cross-contamination activity: Eye/skin damage from UV torches	L	UV torches provided emit 385nm UVA light or “blacklight” which is the safest form of UV light. Use of UV torches will be limited to checking fluorescence on participant’s hands and on a range of objects and participants will not be exposed to UV light for long periods. The activity will be closely supervised and demonstrators will ensure that UV torches are not shone in anyone’s eyes.	L
Cross-contamination activity: Skin/eye irritation from UV lotion & powder	L	Both UV lotion and powder are non-toxic and contain no known skin irritants. Participants will not have contact with lotion or powder for extended periods of time and hands will be thoroughly washed at the end of the activity. Use of the lotion and powder will be closely supervised to ensure no contact with participant’s eyes.	L
Bacterial division game: Slips and trips if counters and dice fall onto floor	L	Game play will be supervised to ensure that all pieces stay on the benches. Any pieces that fall onto the floor will be picked up immediately.	L

Salmonella mock serotyping: Eye irritation if liquids are splashed into eyes	L	Solutions used are low hazard (water, milk and dilute (<10%) lemon juice). Participants will be offered safety glasses and activity will be closely supervised. Nitrile gloves will be offered as part of the laboratory experience, although this is not a health and safety requirement.	L
Salmonella mock serotyping: Slips and trips from spilled liquids	L	Only small volumes of liquids will be provided on each table. Any spills will be cleaned up immediately by a member of staff.	L

Engineering Controls: None required.

Guarding		Extraction (LEV)		Interlocks		Enclosure	
Other relevant information (incl. testing frequency if appropriate):							

Personal Protective Equipment (PPE):

Eye / Face	x	Hand /Arm	x	Feet / Legs		Respiratory	
Body (clothing)	x	Hearing		Other (Specify)			
Specify the grade(s) of PPE to be worn: Reusable safety glasses and lab coats. Disposable nitrile gloves.							
Specify when during the activity the item(s) of PPE must be worn: Lab coats will be worn throughout the workshop, safety glasses and nitrile gloves will be worn during the mock salmonella serotyping activity. Note that gloves are optional for this activity and not required for H&S reasons.							

Non-disposable items of PPE must be inspected regularly and records retained for inspection

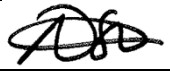
Persons at Risk:

Academic staff	x	Technical staff	x	P'Grad students	x	U'Grad students	
Maintenance staff		Office staff	x	Cleaning staff		Emergency personnel	
Contractors		Visitors	x	Others			

Additional Information: Identify any additional information relevant to the activity, including supervision, training requirements, special emergency procedures, requirement for health surveillance etc.

All workshop demonstrators will receive training, including H&S aspects, before running the activities for visiting groups.
Children taking part in the activities will be accompanied by a responsible adult at all times and school classes will be accompanied by a teacher/staff member from their school.

Assessment carried out by:

Name:	Nicola Stock	Date:	30th July 2018
Signature:		Review Date:	31st Aug 2020