

**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:	Dolly, DNA & Me 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 exploring DNA and inheritance 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	
<i>Your cells up close:</i> Sample your cheek cells using a sterile swab, prepare a microscope slide and examine your cells using a light microscope.	
<i>DNA extraction:</i> Collect your own cheek cells, extract the DNA and transfer it to a poster to take back to school.	
<i>Visible and invisible traits:</i> Examine visible traits by comparing yourself to your fellow pupils and take a taste test to explore one of your invisible traits. Discuss which of these might be inherited.	
<i>Inheritance and selective breeding:</i> Explore dominant and recessive inheritance with our little lambs game.	

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
Your cells up close: Biohazard from swabbing.	L	Only sterile individually packaged swabs will be used. Only one swab will be given out to each participants. Swabs will be discarded as soon as they are finished with.	L
Your cells up close: Sharps hazard if microscope slides are broken.	L	Activity will be supervised at all times. Only one slide and cover slip will be given to each participant. Any broken slides or cover slips will be cleared up immediately by staff and disposed of safely.	L
Your cells up close: Slips and trips from spilled cell staining liquid.	L	Only small amounts of cell stain (commercially available food colouring) will be provided to each participant. Any spills will be cleared up immediately by staff.	

Your cells 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
DNA pendants: Chemical hazard - extraction buffer	L	Participants will wear eye protection, nitrile gloves and lab coats to prevent skin, eye and clothing contact. The extraction buffer will be handled using plastic pipettes and the activity will be closely supervised. In the event of a spill, the buffer will be mopped up with tissue paper and disposed of safely.	L
DNA extraction: Chemical & fire hazard - ethanol	M	Participants will wear eye protection, nitrile gloves and lab coats to prevent skin, eye and clothing contact. The ethanol will be provided in small volumes in tubes with screw cap lids. The activity will be closely supervised. There will be no naked flames in the laboratory. In the event of a spill the ethanol will be mopped up with tissue paper and disposed of safely.	L
Visible and invisible traits: PTC (phenolthio- carbamide) can be toxic in high doses.	M	Participants will be closely supervised and only permitted to taste one PTC strip, keeping their intake well below the recommended limit.	L
Inheritance activity: Cuts from scissors	L	Scissors provided are round-ended classroom scissors. Activity will be closely supervised.	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 Your Cells Up Close and DNA Pendant activities.							

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:	Jayne Quoiani	Date:	27th th Feb 2019
Signature:		Review Date:	