

Bird Beak Adaptation

Written by: Tiela Agnew

Commenced on: 15 May 2022

Expires: 15 Aug 2023

Classes for which experiment is required

Teacher: Tiela Agnew (training code 1)

Year Group: 7

Room

Period

Date

17

4

Wed 18/5/22

Items to be prepared by laboratory technician (training code 1)

10 groups of 3 students. (31 students total)

2x sets of each station (10 stations total)

Seeds station:

1x plastic tweezer

1x plastic spoon

1x tub of seeds/beans/small beads

Nectar station

1x plastic tweezer

1x plastic spoon

1x measuring cylinder with coloured water

Fish station

1x plastic tweezer

1x plastic spoon

1x tub with water and 10-20 paperclips in bottom

Insect station

1x plastic tweezer

1x plastic spoon

1x tub with string/wool pieces

Sticks station

1x plastic tweezer

1x plastic spoon

1x tub with pop sticks

31x plastic straws (students to have one each)

Procedure or reference, including variations

PDF emailed through. Will also discuss on "food" before experiment

Equipment to be used

bead

Potential hazards

May block oesophagus or trachea if eaten or inhaled by young child; possibility of asphyxiation. May also be inserted into ear or up nose.

Standard handling procedures

Store out of reach of young children.

metal tweezers

Potential hazards

Can be used as a weapon if long and sharply pointed.

paper clip (paperclip)

Potential hazards

May cause puncture wounds if unbent.

plastic drinking straw

Potential hazards

May cause injury if inserted into ear, nostril or other body orifice. Do not use for drinking in the laboratory, due to the possibility of chemical contamination.

Standard handling procedures

Do not eat or drink in a laboratory.

plastic teaspoon

Potential hazards

Heating may melt spoon and, if burnt, spoon may release toxic vapours. Organic solvents may affect the plastic. Spoons should not be shared between students

Standard handling procedures

Keep away from heat sources and do not put in Bunsen burner flame. Do not use with organic solvents. Do not eat in a laboratory, due to the possibility of

when used for eating food, due to the possibility of cross-contamination.

string
Potential hazards
May be used as a garotte or restraint.

plastic tub
Potential hazards
May be heavy when filled with liquid and cause injury when lifted or transported.
Standard handling procedures
Transport tub empty if possible.

paddle pop stick (ice cream stick)
Potential hazards
Flammable. Possibility of splinters, especially if broken.
Standard handling procedures
Keep away from naked flames.

Chemicals to be used

water <43.5 °C (cold-warm) **H₂O**
CAS: 7732-18-5
Class: nc PG: none Users: K-12 Training: 1-6
GHS data: Not classified as a hazardous chemical.
Potential hazards
Water below 43.5°C is generally considered safe for adults and children. Cold water causes numbness and hypothermia, if exposure is prolonged.
Standard handling procedures
Water in a laboratory should not be drunk, due to the possibility of chemical contamination. Water spilled on the floor may be a slip hazard.
Disposal
May be poured down the drain.

Biologicals and food to be used

dried bean
Potential hazards
ALLERGY ALERT. Some individuals may have an allergic reaction to legumes, including peas, beans and peanuts.
Standard handling procedures
Keep dry.

sunflower seed
Potential hazards
Do not eat commercial seed stock, since it may be treated with toxic fungicides.
Standard handling procedures
Keep dry. Do not eat in class, due to the possibility of contamination.

Others

food colouring

Knowledge

I have read and understood the potential hazards and standard handling procedures of all the equipment, chemicals and biological items, including living organisms.
I have read and understood the Safety Data Sheets for all hazardous chemicals used in the experiment.
I have copies of the Safety Data Sheets of all the hazardous chemicals available in or near the laboratory.

Risk assessment

I have considered the risks of:

fire or explosion	breakage of equipment	exposure to pathogens	waste disposal
chemicals in eyes	injuries from equipment	injuries from animals	improper labelling/storage
inhalation of gas/dust	rotating equipment	intense light/lasers	inappropriate behaviour
chemicals on skin	electrical shock	UV, IR, nuclear radiation	communication issues
ingestion of chemicals	vibration or noise	pressure inside equipment	allergies
runaway reaction	sharp objects	heavy lifting	special needs
heat or cold	falling or flying objects	slipping, tripping, falling	other risks

Certification by Teacher

I have assessed the risks associated with performing this experiment in the classroom on the basis of likelihood and consequences using the School's risk matrix, according to International Organization for Standardization Standard ISO

31000:2018.

I consider the inherent level of risk (risk level without control measures) to be:

Low risk

Medium risk

High risk

Extreme risk

Risks will therefore be managed by routine procedures in the classroom.

Electronic Signature: Tiela Agnew

Date: 15 May 2022

You have provided an electronic signature which is the equivalent of signing your name with a pen and as such will constitute a legally binding agreement between the relevant parties. We can give no warranty in respect to fraud or security breach resulting from the use of an electronic signature.

Certification by Laboratory Technician

I have assessed the risks associated with preparing the equipment, chemicals and and biological items, including living organisms, for this experiment and subsequently cleaning up after the experiment and disposing of wastes, on the basis of likelihood and consequences using the School's risk matrix, according to International Organization for Standardization Standard ISO 31000:2018.

I consider the inherent level of risk (risk level without control measures) to be:

☐ Low risk ☐ Medium risk ☐ High risk ☐ Extreme risk

Where the risk level is "medium risk", "high risk" or "extreme risk", the following control measures will be employed:

Control measures (attach further pages as required):

☐ safety glasses ☐ gloves ☐ lab coat ☐ apron ☐ fume cupboard

With the specified control measures in place, I have found that all the risks are "low risk". Risks will therefore be managed by routine procedures in the laboratory, in combination with the specified control measures.

Name:

Signature:

Date:

Monitoring and review

This risk assessment will be monitored using comments below and will be reviewed within 15 months from the date of certification.

Attach further pages as required