MINT Workshops

Sessions Overview

Through a series of entertaining and educational workshops, based on practical hands-on experiences, this course is designed to give an appreciation of how the subjects of Maths, IT, Natural Sciences and Technology contribute to everyday applications, through the medium of Photography/Imaging and for children to gain an insight into a range of related careers.

Breakdown of Sessions for the MINT Workshops:

Session 1: Time Lapse

Learning opportunities include:

- Growing beansprouts, (or similar quick growing plant).
- Measuring daily growth
- Creating a spreadsheet
- Entering information into a spreadsheet
- Showing results in chart form.
- Capturing images at regular intervals – 'programme' cameras for night?
- Camera supports - tripod

Possible extension - Repeat to vary the growing conditions and measure the effects

Session 2: The Same But Different

Learning opportunities include:

- What is Genetics?
- Why some beansprouts might grow more quickly than others
- Variables - water, light, heat, soil
- Why we are all different/similar to our parents/siblings
- Collect/capture full face images from home
- Scan/upload to computer
- Combine in software (left side of one face/right side of the other and vice versa

Session 3: Monster Foods?

Learning opportunities include:

- What is Genetic Modification of Foods?
- Why are foods modified?
- Advantages and disadvantages

- Food Photography
- Lighting
- Uploading images
- Modifying in software – colour etc.

Session 4: Microworld

Learning opportunities include:

- Macro Photography
- Capturing images of small creatures – borescope –
- Principles of light – that light travels in straight lines
- That light travels from source of light to object to eye
- That shadows have the same shape as the object.
- That light can be manipulated through fibre - optics

Session 5: Don't Eat Me!

Learning opportunities include:

- What is meant by 'Food Chain'?
- Capture images of plants and/or animals in the locality
- Research to find what they are and their place in the food chain.
- Build up photo collage of the food chain using captured images and prints from computer.

Session 6: Growing Up

Learning opportunities include:

- How all living things change as they grow e.g. spawn/tadpole/frog.
- Capture images at different stages of growth
- Research each stage/time at each stage
- Capture images of people from ages of 5-90 at 5 year intervals and display on a timeline.
- Portraits and full length images
- Photography for portraits

Session 7: Materials

Learning opportunities include:

- Capturing objects made from a range of different materials.
- Organising the images into families on computer – wood, metal, glass, plastics, textiles, card, paper etc.
- Identify different products made from the same material eg copper and say why that material would be a good choice for each product.

Session 8: Materials - Structures

Learning opportunities include:

- What is Triangulation?
- Find and capture objects showing triangulation
- Upload to computer
- Highlight the triangles
- Find and capture structures where triangulation is not obvious – repeat as above

Session 9: Sunlight

Learning opportunities include:

- Movement of the earth in relation to the sun.
- Monet @ Rouen Cathedral.
- Capture images of a chosen object throughout the day from the same position.
- Organise images in time order on computer
- Compare the results.
- Identify differences in light/shadow/colours

Session 10: Falling Down

Learning opportunities include:

- What is Gravity?
- Using a stop watch to time different objects falling from the same height
- Panning - capture falling objects in camera
- Measure the effect of resistance by dropping the same objects but this time using a parachutes of different sizes to slow the objects.
- Charting the times against the original