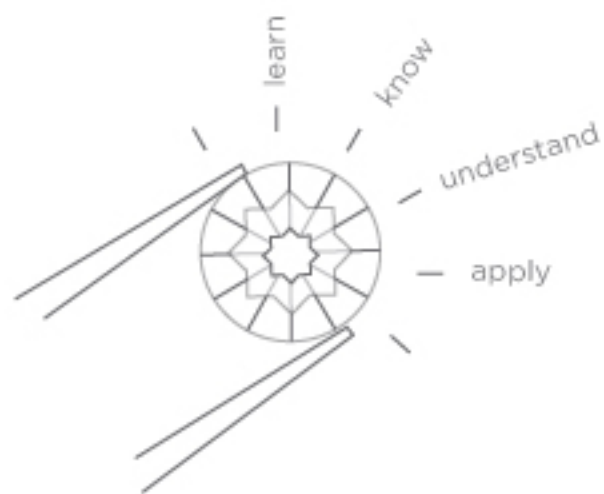


R◊WENA MURRAY

- Education & Events -
Projects



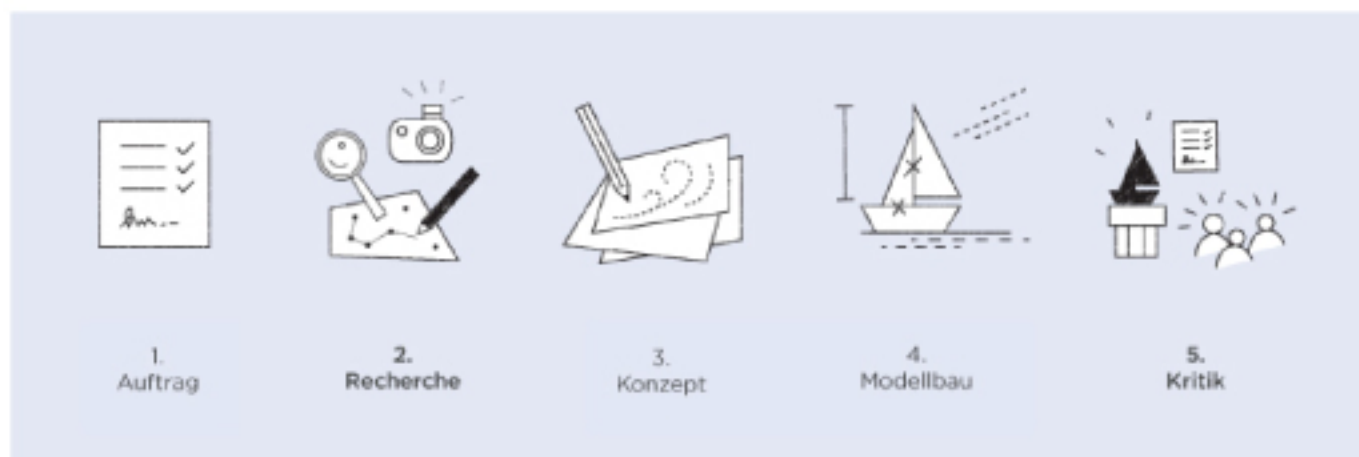
ROWENA MURRAY

- Education -

"The Design Process"

Course Overview

'The Design Process'



Course Locations: Bayerische Mesiterschule für das Uhrmacherhandwerk, Würzburg

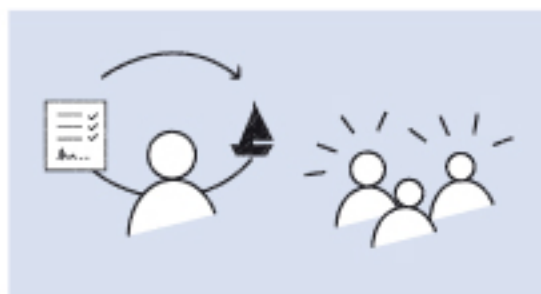
Uhrmacherschule Glashütte, Dresden

The purpose of the course is to give participants an insight into the process of design, to support the development of their personal 'master' projects. The module consists of theoretical presentations, group work, a research field-trip, individual tutorials, drawing sessions, modelmaking workshops and group critique leading to a final presentation of the finished design models.



Product Analysis (Case Studies)

Specialist Course 'The Design Process'



Course Content

- Formulating a design brief -
- Researching & developing ideas -
- Modelmaking & product testing -
- Presenting finished works -



Modelmaking Workshops



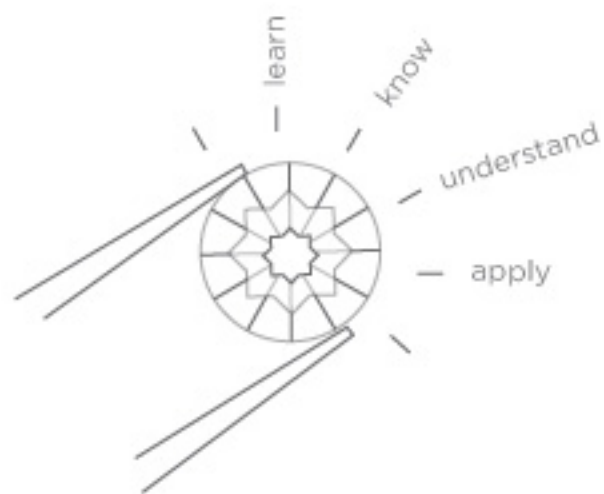
Research Excursion (sketching)



Individual & Group Critiques



Experiments with Design Principles

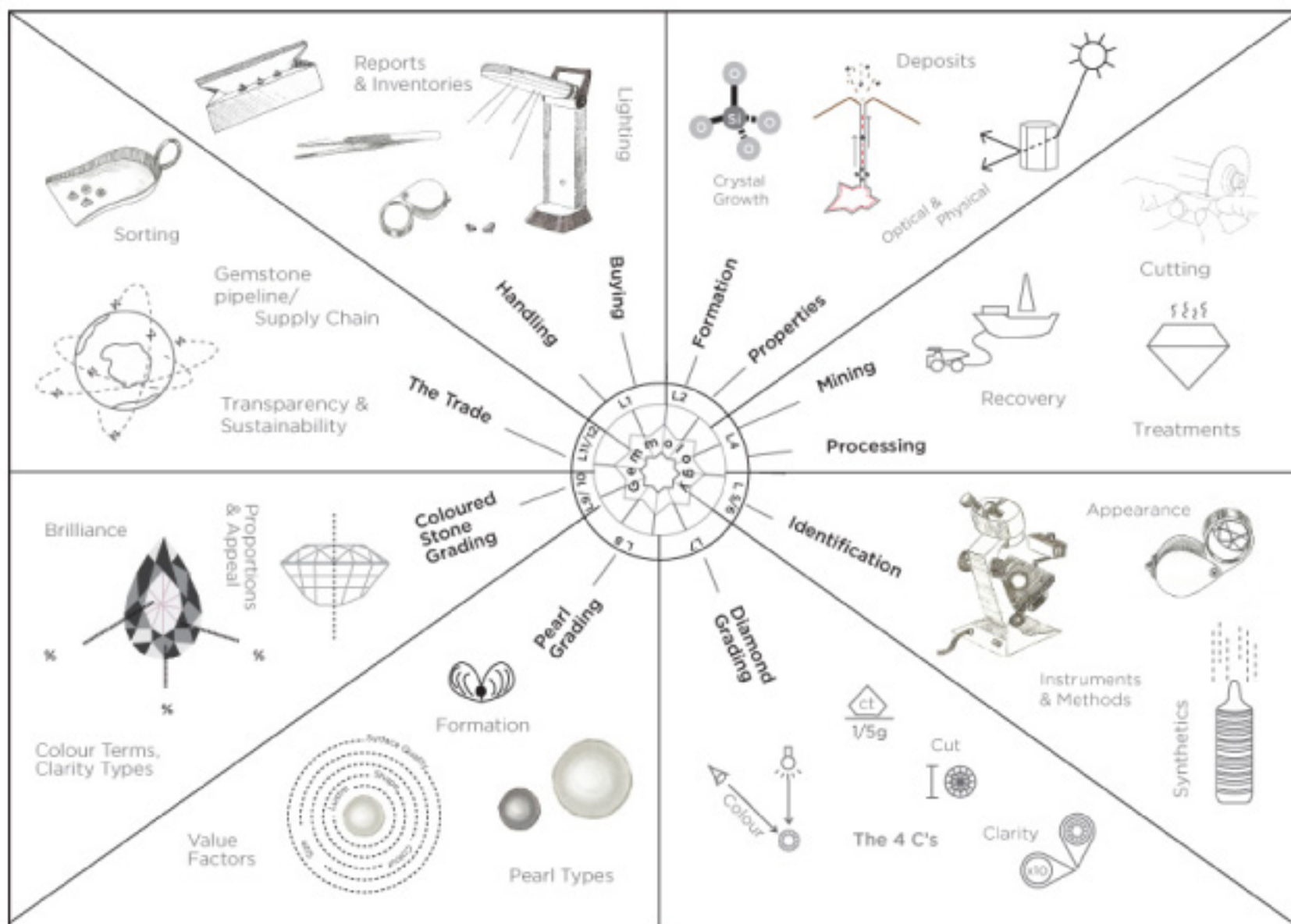


ROWENA MURRAY

- Education -

"The Fundamentals of Gemmology"

Course Overview



Eigenschaften -> Optik

Lichtbrechung

Wenn ein Lichtstrahl von einem Medium schräg in ein anderes eintritt, deutlich verbeugt und manchmal auch gebogen wird.

Anisotropie (Doppelbrechung)
Wenn ein Lichtstrahl beim Eintritt in einen Kristall gebrochen und gleichzeitig in 2 Strahlen zerlegt wird.

Planchonische

Unterschiedliche Farben oder Farbflächen in Doppelbrechender Edelsteine, die in verschiedenen Richtungen auftreten.



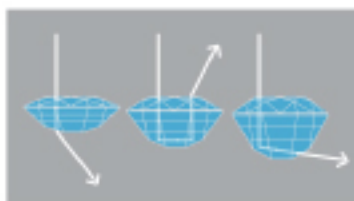
Schliff

-> Graduierung

1. Brillanz %
- Lichtreflexionen
- Fenster %
- Licht-Lockage
- Lichtung %
- dunkle Stellen

2. Proportionen
- Formelz (Optik)
- Profil Symmetrie
- Gesicht Symmetrie

3. Äußere Merkmale
- Polier
- Facettensymmetrie



Lichtverhalten
Schliffbeding

EX HERRVORZUGEND VO SEHR GUT GUT MITTEL PÖRIG

Kristallform -> Habitus



Habitus: Die Gestalt der Kristalle

Course Content

- Theoretical Knowledge -



Through presentations, mock scenarios and a museum excursion, we encounter:

- Scientific, Aesthetic and Commercial principles -
- The 4 C's quality grading language -
- Trade terms and their meaning -
- Global trading systems -
- Industry players and current issues -

Prospektion -> Die Suche



Gewinnung -> Bergbauregionen



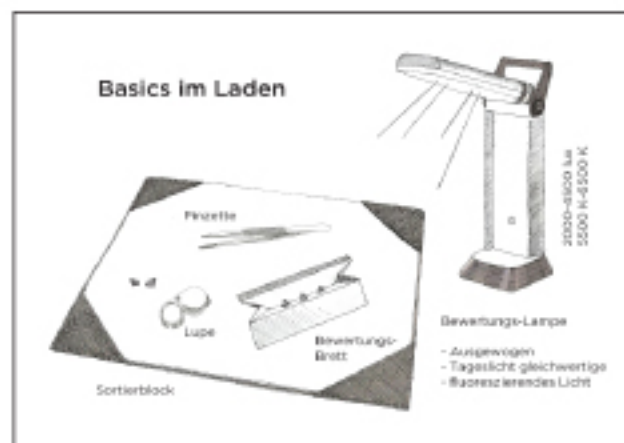
Synthesisierung -> Eine Geschichte





Course Content

- Practical Skills -



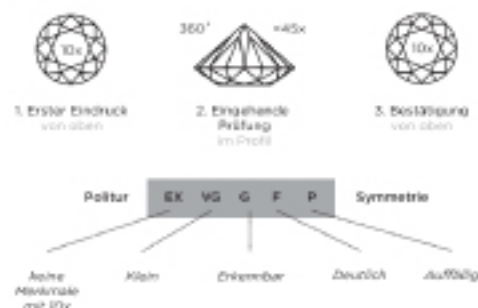
A series of hands-on workshops introducing the instruments and methodology for:

- Gemstone Identification -
- Diamond, pearl & coloured stone grading -
- Detection of treatments, synthetics & imitations -
- Sorting, selecting and pricing of goods -



Politur & Symmetrie

-> Methodik



Spektroskop

-> Absorptionsspektrum

Spektroskop
Kann die genaue Bestimmung eines Edelsteins ermöglichen bei der Darstellung seiner charakteristischen Absorption des Lichts.

Das Prinzip
Durch Prismen oder eine gedrehte Glasscheibe, wird weißes Licht in das sichtbare Spektrum zerlegt.



Untersuchungsmethode:

- Edelstein vor die Lichtquelle bringen
- Spektroskop darüber halten & hindurch schauen
- In verschiedenen Richtungen untersuchen



Course Structures

- Theory Course -

Lesson 1

Introduction: Working with Gemstones

- Handling (Loupe, Tweezers)
- Presentation (Care of, Lighting methods)
- Trading (Pricing, Inventories, Grading Reports)

Lesson 2

Group Excursion: Mineralogy and The Study of Gemstones

- Formation (Geological processes)
- Crystallography (Crystal growth, forms, systems)
- Mining (Deposits, Recovery)

Lesson 3

The Gem Lab: The Identification of Gemstones

- Gemstone Observation (appearance, characteristics)
- Key Tests (Instruments - Refractometer, Microscope etc.)
- The Gem Lab (Further tests, field gemmology, gemstone database)

Lesson 4

The Gem Trade: Behind the Scenes

- Cutting & Treating
- Synthetics & Imitations
- Current Topics (Transparency, Sustainability, Consumer habits)

- Practical Course -

Lesson 1/2

Diamond Grading

- 4 Cs Methodology & Tools of the Trade
- Lab: Grading with Microscope & Loupe

Lesson 3

Coloured Stone Grading

- 4 Cs Methodology & Pricing Systems

Lesson 4

Pearl Grading

- Types, categories and value factors

Lesson 5/6

Gemstone Identification

- Methodology & Instrumentation of the lab
- Synthetics & Imitations

Lesson 7

The Gem Trade

- Sourcing, Matching & Selecting, Current topics

Lesson 8

Course Review

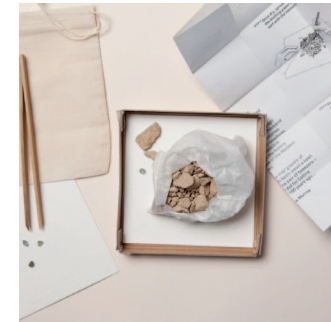
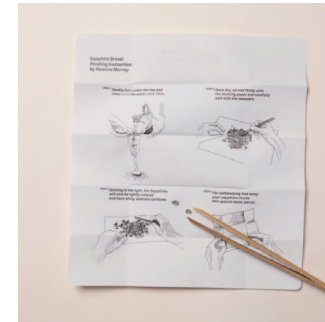
- Content Review, Discussion, Feedbacks & Exam



'Montana Sapphire Gravel Washing Kit' (2014)

Saturday Market Project

- Kit containing Missouri river gravels and genuine Montana Sapphires-
- Muslin straining bag and bamboo tweezers for sorting-
- Folded gemstone paper parcel for storage -
- Historical background story printed onto paper parcel-

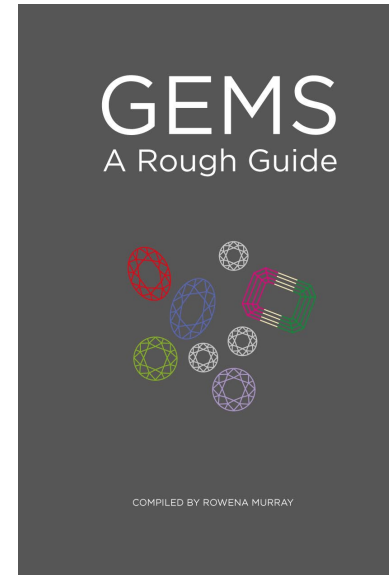


Designed in collaboration with American startup retailer The Saturday Market Project, the kit gives the user an experience of mining and sorting for gems in a package of genuine Missouri river gravels. The project was launched at the London Design Festival 2014, alongside a video documentary explaining the history of these sapphires, which were mined in Montana from the 1890's



'Cocktail Gemmology' (2014)
London Design Festival - The Saturday Market Project

- Introductory masterclass to gemstones -
- Demonstrating gemstone formation via cocktail-making -
- Genuine pearl-bearing oysters and rough gem samples -



EMERALD	BERYL
CHEMICAL COMPOSITION	Be ₃ Al ₂ Si ₆ O ₁₈
RI	1.577-1.583
BIREFRINGENCE	.005-.009
OPTIC CHARACTER	DR
SPECIFIC GRAVITY	2.72
TRANSPARENCY	TR STP TH STL O
TOPE	W L M B VDK
HUE RANGE	P R O Y G B V
TYPICAL CUTTING STYLES	IFAC CAB CAB BD TUM
TYPICAL SIZE RANGE (CT)	1 2 3 5 20 100 200+
HARDNESS (scratching)	1 2 3 4 5 6 7 8 9 10
TOUGHNESS (breaking)	EX VG G F P
STABILITY (Y/N)	LIGHT HEAT ACIDS
CLEAVAGE	NONE DIFFICULT EASY
CLEANING METHODS (Y/N)	SOAP ULTRASONIC STEAM
CLARITY TYPE	I II III CWAQUE
POLISH LUSTRE	AD VIT GRE RES DOLL
ABSORPTION SPECTRUM	
CAUSE OF COLOUR	Chromium & (rarely) Vanadium
PLEIOCHROISM	Green to Bluish-Green
CHARACTERISTICS	3 phase inclusions, pyrite, mica tremolite needles
ENHANCEMENTS	Oiling (fill fractures): seen in 90%+ of Emeralds on the market
SYNTHETIC FORMS	Hydrothermal, Flux
AVAILABILITY	Limited to Scarce (in large, fine quality)
SOURCES	Columbia, Zambia, Brazil, Pakistan, Afghanistan, USSR, Australia
CARE OF	When cleaning in soapy water, use a weak solution and do not scrub. Oil used to fill fractures can fade/discolour in the light.

'Gems: A Rough Guide' (2013)
Self-publication

A self-published guide to gemstones developed as a study aid for gemologists in the field, with statistics and properties for 25 of the main commercially available gemstones, in a portable and dramatically reduced scale compared to lab manuals. Complete with illustrations of typical appearance and cutting-styles as well as typical trade names and treatments.



Vogue 'Streetlights' (2011)
Mouassieff, Bond St window display - with Eleanor Bolton



'Pin the Pearl on the Painting' (2011)
Store Competition - Lila's Jewels



'The Shape of My Heart' (2009)
Victoria & Albert Museum - Brooch-making workshop

Developed at the Royal College of Art, the kit consisted of a needle, thread and fabric which the user stitched and stuffed to make their own brooch using the entire packaging/instructions themselves. Each finished brooch was photographed and showcased online in a dedicated website/online shop.



'Brilliant! All About Diamonds' (2018)

- 3D Origami booklet 10x10cm-
- 100% recycled paper & Mineral-oil free inks -
- Artwork by Rory Jacob Farrell -
- Printed in England-

Inspired by the childhood fortune-teller, 'Brilliant! All about Diamonds' was conceived as a way to explain simply the science and beauty of a diamond to absolute beginners e.g. in a retail environment. Designed in collaboration with graphic designer Rory Farrell, the 'cushion' shaped diamond opens up to reveal 8 topics explained through a mix of text and illustrations.