Secondary Science SBE
Lesson Plan Framework

Lesson Title: Refraction + Colour

Group: 8_0 Location: Lab 1 Date/Time: 5th June/13h15 to 14h15

Learning Objectives: Pupils should learn:

- to predict how light changes in different mediums.

Learning Outcomes: Most students should be able to:

- explain why the spectrum has seven colours.
- to use scientific knowledge to suggest reasons for physical phenomena.

National Curriculum/Syllabus References (incl. reference to previous KS)

Ks3, Sc4 Physics, Exploring science text book, Topic about light refraction, NC 5

Links to other areas

Literacy, visual, verbal and kinaesthetic learning styles.

Previous assessment details informing this lesson.

Last lesson was used to introduce the reflection idea by making a practical activity about investigating light refraction. Pupils developed investigative skills.

Differentiation

By questioning
By use of stimulus material
By pace of the lesson and relevant use of starters
By support
By guided modelling

Health and Safety

Lesson safe for pupils but see risk assessment attached.

Lesson Development

Timing (min)	Teacher activity	Pupil activity	# Resources	Assessment Items
3	Taking the register	Pupils will pay attention to the register.	Teacher planner	
5-10	Sharing lesson aim And introducing starter activity.	Pupils will be listening and write down the lesson aim about investigating light refraction related with the spectrum of colours. As a starter pupils will have an interactive game with Q+A recapping the last lessons contents.	Computer Books	Assessing pupils' behaviour during starter.
10	Going over power point with a brief explanation establishing a link with the entrance activity.	Pupils will be listening to brief explanation understanding and recapping how light bent or refract. Pupils will also understand why the existence of the spectrum colours by using a prism. Hopefully pupils will interact with the teacher to develop further knowledge.	Computer Power point White board Board works Prism Ray boxes	Q+A Assessing pupil's communicative skills being developed.
15-20	Setting a practical investigative work.	Pupils will make a practical activity by building a Newton's disc to investigate the colours of the spectrum.	Books Computer Power point Paper cards String Felt tips Colour pencils	Assessing pupils developing investigative skills.

10	Setting a plenary activity.	Pupils need to write a poem (groups of 2) about the colours of spectrum and what they have learnt about it. Pupils will need to take a look to the spectrum slide and be able to write all the colours with the right sequence.	White board Computer Power point books	Assessing pupils individually and making sure that all are on task for learning. Pupils will be developing literacy and science creative knowledge.
5	Setting instructions to pack away.	Receiving the homework. All pupils should clean their desk, pack away and move to next lesson.	Planner Homework sheet	Marking the homework

PGCE & BSc. Secondary Science(School based Form)

Risk Assessment

Title of Practical Activity: Colour

Teachers and pupils involved: teacher, trainee teacher and 32 pupils

Substances hazardous to health - Chemicals regulated by COSHH	
1. using ray boxes	**6.**
2. using glass prisms	**7.**
3.	**8.**
4.	**9**
5.	**10.**

Hazardous procedure or item of equipment.

- Ray boxes, rulers, power battery, paper, prisms, colour pencils, string and scissors

Risk estimator > 10 then risk is unacceptable; rethink control measures)

Likelihood of occurrence	**L Score**	**Severity of Outcome**	**O Score**
Highly unlikely	**1**	Slight inconvenience	**1**
May happen but rare	**2**	Minor injury	**2**
Does happen but rare	**3**	Medical attention required	**3**
Occurs time to time	**4**	Major injury leading to hospitalisation	**4**
Likely to occur often	**5**	Fatality or serious injury	**5**

Practical Risks

Hazard	**L Score**	**O Score**	**Total (Lx O)**	**Control Measures**
1	1	1	1	Teachers will aware pupils of all risk assessment and will explain what they need to do with the ray boxes having careful with all the material.
2	2	2	4	Teacher will be aware of pupils being careful with glass equipment.