Science		
Science **Exploring Light**	**Engage**	**Year 5**
Lesson 2 **60 mins**	**The Dark**	
Ways of Working: • pose and refine simple questions, and make predictions to be tested • collect and organise data, information and evidence • communicate scientific ideas, data and findings, using scientific terminology and formats appropriate to context and purpose • identify and apply safe practices • reflect on and identify different points of view and consider other people's values relating to Science • reflect on learning to identify new understandings and future applications.	**Science Understanding** **Physical sciences** Light from a source forms shadows and can be absorbed, reflected and refracted (ACSSU080) **Science as a Human Endeavour** **Nature and development of science** Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena (ACSHE081) **Science Inquiry Skills** **Questioning and predicting** With guidance, pose questions to clarify practical problems or inform a scientific investigation, and predict what the findings of an investigation might be (ACSIS231) **Planning and conducting** With guidance, plan appropriate investigation methods to answer questions or solve problems (ACSIS086) Use equipment and materials safely, identifying potential risks (ACSIS088) **Processing and analysing data and information** Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (ACSIS090) Compare data with predictions and use as evidence in developing explanations (ACSIS218)	

	Evaluating Suggest improvements to the methods used to investigate a question or solve a problem (ACSIS091) **Communicating** Communicate ideas, explanations and processes in a variety of ways, including multi-modal texts (ACSIS093) The Australian Curriculum: Science for Prep (F) – 10 http://www.australiancurriculum.edu.au/Science/Curriculum/F-10#cdcode=ACSSU080&level=5 Retrieved 6th October 2013. This lesson will elicit further students understanding of dark places and how light helps us to see. We will explore the dark and the student's perception of dark places through concept mapping; this will be done as a group discussion and mapped on Buble.us. The conclusion of this lesson will be a viewing of the promo clip from the Hayward Gallery detailing artist that have used light in their artwork. This clip will be a discussion point for the materials used how those materials reflect, refract and transmit; this is a good resource for this topic. I**ntroduction:** We start this lesson with a revision of the previous weeks understandings. This lesson requires the students to experience a dark place. The students will close their eyes and put their head down on the desk to create as dark a space as possible. I will then create a visualisation that we will discuss and concept map later. Firstly I will ask the students questions such as: • What does it feel like? • Can you describe this place? • What could you see? • How did it feel? **Body of lesson:** We will have a discussion about their perceptions of dark places and create a concept map together on buble.us, I will print this and they can put them into their journals. The graphic organiser will be used to access both new and prior knowledge.

	The students will then complete the **In the dark** worksheet, I will explain that at this stage the worksheet are being used to gather data about what they are thinking. **Conclusion:** In the last 15 mins I will show the students a clip from the Hayward Gallery Lightshow, it is an exhibition that features artists from the previous five decades that have used light to create their sculptural pieces, it is visually beautiful and give the students various ways to view light, reflected, refracted, transferring through translucent and transparent media a stimuli for later leanings, discussion and inquiry. http://www.youtube.com/watch?v=rY5BHWYIDIo
Knowledge and understanding: Science as a human endeavour. Scientific ideas can be used to explain the development and workings of everyday items Science can contribute to people's work and leisure	**Resources:** • Science journals • Science chat board • Word wall • In the dark, prepared worksheet. • http://www.youtube.com/watch?v=rY5BHWYIDIo • Bubbl. us https://bubbl.us/ • Computer • Data projector **For Teams:** • Badges for team roles, Manager, Director, Speaker. • Marking Pens • Scissors • Glue
Evidence of learning: • Students will be able to discuss their perceptions of how we need light to see	**General Capabilities:** **Literacy** Word Knowledge • Understand learning area vocabulary Composing texts through speaking, writing and creating

• The students will use concept mapping to communicate those understand-ings	• Compose texts Compose spoken, written, visual and multimodal Grammar knowledge • Use knowledge of sentence structures • Use knowledge of words and word groups • learning area texts **Critical and Creative Thinking:** The particular elements of Critical and creative thinking addressed by this content description Inquiring – identifying, exploring and organising information and ideas • Organise and process information • Pose questions • Identify and clarify information and ideas Reflecting on thinking and processes • Reflect on processes Analysing, synthesising and evaluating reasoning and procedures • Evaluate procedures and outcomes **Personal and social capability** The particular elements of Personal and social capability addressed by this content description Self-management • Become confident, resilient and adaptable • Work independently and show initiative Social management • Communicate effectively **Information and communication technology capability**

	The particular elements of Information and communication technology capability addressed by this content description Creating with ICT • Generate ideas, plans and processes Investigating with ICT • Define and plan information searches
Helpful Teachers Resources:	I • In the dark worksheet • http://www.youtube.com/watch?v=rY5BHWYIDIo • Bubbl. us <https://bubbl.us/ >
Possible Alternative conceptions or misunderstandings about light.	. Students may believe that light needs to hit the eye to see objects Or that animals that see in the dark have eyes that glow.