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**Planning**

**Documents**

**Early Childhood**

**University of**

**Notre Dame**

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| **ndgrey_l** |  **EARLY YEARS LEARNING FRAMEWORK**  |

**COLOUR KEY: Term 1 Term 2 Term 3 Term 4**

**Outcomes:**

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| **OUTCOME 1: Children have a strong sense of identity** | **OUTCOME 2: Children are connected with and contribute to their world** | **OUTCOME 3: Children have a strong sense of well being** | **OUTCOME 4: Children are confident and involved learners** | **OUTCOME 5: Children are effective communicators** |
| Children feel safe, secure, and supported | Children develop a sense of belonging to groups and communities and an understanding of the reciprocal rights and responsibilities necessary for active community participation | Children become strong in their social and emotional wellbeing | Children develop dispositions for learning such as curiosity, cooperation, confidence, creativity, commitment, enthusiasm, persistence, imagination and reflexivity  | Children interact verbally and non-verbally with others for a range of purposes |
| Children develop their emerging autonomy, inter-dependence, resilience and sense of agency | Children respond to diversity with respect | Children take increasing responsibility for their own health and physical wellbeing | Children develop a range of skills and processes such as problem solving, enquiry, experimentation, hypothesising, researching and investigating | Children engage with a range of texts and gain meaning from these texts |
| Children develop knowledgeable and confident self identities | Children become aware of fairness | Children transfer and adapt what they have learned from one context to another | Children express ideas and make meaning using a range of media |
| Children learn to interact in relation to others with care, empathy and respect | Children become socially responsible and show respect for the environment  | Children resource their own learning through connecting with people, place, technologies and natural and processed materials | Children begin to understand how symbols and pattern systems work. |
| Children use information and communication technologies to access information, investigate ideas and represent their thinking |

**Principles:**

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| 1. Secure, respectful & reciprocal relationships | 2. Partnerships | 3. High expectations & equity | 4. Respect for diversity | 5. Ongoing learning & reflective practice |

**Practices:**

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| Holistic approaches | Responsiveness to children | Learning through play | Intentional teaching |
| Continuity of learning & transitions | Cultural competence | Assessment for learning | Learning environments |

**Year 1 Syllabus**

**Year Level Description**

The science inquiry skills and science as a human endeavour strands are described across a two-year band. In their planning, schools and teachers refer to the expectations outlined in the achievement standard and also to the content of the science understanding strand for the relevant year level to ensure that these two strands are addressed over the two-year period. The three strands of the curriculum are interrelated and their content is taught in an integrated way. The order and detail in which the content descriptions are organised into teaching and learning programs are decisions to be made by the teacher.

**Incorporating the key ideas of science**

From Pre-primary to Year 2, students learn that observations can be organised to reveal patterns, and that these patterns can be used to make predictions about phenomena.

In Year 1, students infer simple cause-and-effect relationships from their observations and experiences, and begin to link events and phenomena with [observable](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/observable) effects and to ask questions. They observe changes that can be large or small and happen quickly or slowly. They explore the properties of [familiar](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/familiar) objects and phenomena, identifying similarities and differences. Students begin to value counting as a means of comparing observations, and are introduced to ways of organising their observations.

**Maths**

Students will collect data based on their findings from the activities

**English**

**Light and Sound Word Wall**

Understanding of sound and vibrations in a written summary or picture format

Collaborate with others

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| **ndgrey_l** | **CONCEPT MAP****(option 1)** |

**Spiritual Education**

**How to treat others during activities**

Create a rating scale and reflect a personal response

Concept: Physical Science – Light and Sound
Term: 3
Weeks: 1-5

**Science / Technology & Enterprise**

Record the outcome of the investigation on Photo booth (on iPad)

**Health & Physical Education**

Identify one example of source of light or sound whilst exploring the school.

**Society and Environment**

 **How shadows move with the sun**

Colour Key

Physical (Fine Motor)

Physical (Gross Motor)

Social

Emotional

Cognitive/ Language

Creative/Aesthetic

Spiritual / Moral

**The Arts**

**Create an art piece based on a personal response about the topic.**

**Draw your findings**

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| **EYLF****PRACTICES** | **Responsiveness to children** | **Learning through play** | **Intentional teaching** | **Learning environments** | **Assessment for learning** | **Cultural competence** | **Continuity of learning & transitions** | **Holistic approaches** |
| **PRINCIPLES** | **1. Secure, respectful & reciprocal relationships** | **2. Partnerships** | **3. High expectations & equity** | **4. Respect for diversity** | **5. Ongoing learning & reflective practice** |
| **OUTCOMES** | **1.Children have a strong sense of diversity** | **2.Children are connected with and contribute to their world** | **3.Children have a strong sense of wellbeing** | **4.Children are confident and involved learners** | **5.Children are effective communicators** |

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| **TERM/WEEKS: 2** |  **YEAR LEVEL: ONE** | **LEARNING AREA/TOPIC: LIGHT AND SOUND** |

 **FORWARD PLANNING DOCUMENT**  |

**AUSTRALIAN CURRICULUM**

**General Capabilities:**

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| **Literacy** | **Numeracy** | **ICT** | **Critical and creative thinking** | **Ethical Behaviour** | **Personal and social Competence** | **Intercultural Understanding** |

**Cross-curriculum priorities:**

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| **Aboriginal and Torres Strait Islander histories and Cultures** | **Asia and Australia’s engagement with Asia** | **Sustainability** |
| **5E’s- ENGAGE (1-2 lessons)*** To capture student interest and find out what they know about light and sound
* To elicit students’ questions/ prior knowledge about light and sound
* Diagnostic assessment used- in this lesson you will find out what the students already know about light and sound. This will allow you to take account of students’ existing ideas when planning learning experiences
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| **WEEK/****LESSON** | **EYLF****Prin Prac O/C** | **AUSTRALIAN CURRICULUM** **LINKS** | SPECIFIC LESSONOBJECTIVE | **ASSESSMENT****(what & how)** | **TEACHING & LEARNING** **EXPERIENCES****(include learner diversity)** | **KEY****QUESTIONS** | **RESOURCES** |
| 1-1 | 2 | 5 | 4.1 | Light and sound are produced by a range of sources and can be sensed [(ACSSU020)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acssu020)Pose and respond to questions, and make predictions about [familiar](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/curriculum-browser/science-v8/overview/glossary/familiar) objects and events [(ACSIS024)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acsis024) | 1. Describe the sources of sound and light2. Create a rating scale and reflect a personal response | **Diagnostic***Students individual rating scale*The educator will record observational notes on students rating scale. This ensure that the educator is aware of which students may need assistance for the progression of the topic. | Introduction:* As the students come back into the classroom after lunch, an Aboriginal music YouTube clip will be played. The students will be invited to walk around the room quietly and observe the Aboriginal instruments and light materials set out in the classroom.
* Students will be asked to share their thoughts about the music and what the materials may represent.
* After five minutes, the students will locate back to the mat. As a class, the TWLH chart will be applied to brainstorm all about light and sound.

Lesson Body:Students will individually create an art piece using open-ended materials provided to represent their understanding of light and sound. For the duration of the art activity, the educator will walk around the room to discuss students answers about light and sound. Conclusion:Students will gather onto the mat to discuss personal responses based on light and sound.Students will return to their desks to complete a rating scale in their science journal. It is a rating from one (meaning not confident at all) to five (meaning very confident) about the topic light and sound.Learner Diversity:The activity has been altered to suite the learning styles of all students.Safety Considerations:Students must be aware of spills from glues and must be reminded to remain responsible with materials.  | *In your head, think about what these items may be used for?**How does sound make you feel?**How does light make you feel?* | <https://www.youtube.com/watch?v=V1pDPuetPdg>Musical Instruments:* Clapsticks
* Mini didgeridoo
* Seed rattles
* Mini Hand Drum

Other:* Torches
* Lamps
* Fake candle tea light

Student Science Journal  |

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| **5E’s- EXPLORE (2-3 lessons)*** To provide hands on, shared experiences of light and sound
* To support students to investigate and explore ideas about light and sound
* Formative assessment
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| **WEEK/****LESSON** | **EYLF****Prin Prac O/C** | **AUSTRALIAN CURRICULUM** **LINKS** | **SPECIFIC LESSON****OBJECTIVE** | **ASSESSMENT****(what & how)** | **TEACHING & LEARNING** **EXPERIENCES****(include learner diversity)** | **KEY****QUESTIONS** | **RESOURCES** |
| 2-2 | **5.** | **2.** | **4.** | Light and sound are produced by a range of sources and can be sensed [(ACSSU020)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acssu020)Respond to and pose questions, and make predictions about familiar objects and events.Science involves asking questions about, and describing changes in, objects and events (ACSHE021) | 1. State one object that light can shine through.2. State a prediction about what may happen to the shadow | **Formative (objective 1)**Observational notes will be applied for the duration of activity one, to record students answers about what light can shine through.**Formative (objective 2)**The educator will use a checklist to record students predictions about shadows. | **Introduction:**1. The educator will explain to students that the introduction of the lesson will begin outside.
2. Before this happens, the educator will discuss some “rules about what should be considered whilst going outside into the playground.
3. Once students are outside the educator will begin the lesson and discuss all about shadows.
4. The educator will explain how a shadow is the dark shape made when something blocks light.
5. Students will mark their shadows using chalk and next to their shadow they will mark their initial and the time.
6. Before students go back into the classroom, the educator will explain how the students must write a prediction in their Science journal about what they think might happened to their shadow.

**Lesson Body:**1. The lesson will consist of two activities.**Activity One**Using torches, shine the light through each object and record down if the light was about to shine through.**Extension**: A challenge will be offered to those students who complete the activity with confidence. The challenge involves a question: Which objects lets through the most light and which object lets through the least?**Enable**: The educator will provide one on one teaching to assist the students who display troublesome during the activity. **Activity Two:**Students will be asked to find a window with sunlight, choose a stencil to trace on the baking paper.Enable: If students display difficulty in holding the baking paper to the window, sticky tape will be available to support their drawing.**Safety Considerations:*** The educator must remind students to remain calm and responsible with peers whilst being outside for the beginning of the lesson.
* For activity one, ensure that the students handle all objects with care. It is vital for the educator to remind students about the importance of not shining the torches into other students faces/eyes.
 |  | Activity 1:* Chalk
* Torches
* Baking paper
* Aluminium foil
* Glad wrap
* Tissues
* Paper
* Card board
* Rocks
* Leaves
* Plastic

Activity 2: * Tracing stencils
* Windows with sunlight
* Drawing materials
* Sticky tape
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| **5E’s- EXPLAIN (1 lesson)*** To support students to develop explanations for experiences and make representations of developing conceptual understandings
* Formative assessment
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| **WEEK/****LESSON** | **EYLF****Prin Prac O/C** | **AUSTRALIAN CURRICULUM** **LINKS** | **SPECIFIC LESSON****OBJECTIVE** | **ASSESSMENT****(what & how)** | **TEACHING & LEARNING** **EXPERIENCES****(include learner diversity)** | **KEY****QUESTIONS** | **RESOURCES** |
| 2-1 | **5.** | **3.****7.** | **4.** | Light and sound are produced by a range of sources and can be sensed [(ACSSU020)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acssu020)Science involves asking questions about, and describing changes in, objects and events (ACSHE021) | 1. Explain their understanding of sound and vibrations in a written summary or picture format (ACSHE021) | **Formative**Informal observational notes will be used to assess students understanding about the topic, based on the objective. | **Introduction:**1. Students will be asked to now put their “imaginary musical hats” on as the lesson focus is on sound.
2. Before the text is read, students will be asked a couple of questions, regarding sound and vibrations.
3. After the text has been read, a couple of questions will begin a whole class discussion and descriptive words will be added to the word wall.
4. Educator will recap on the definition of sound and vibrations.

**Lesson Body:**1. The educator will demonstrate the activity before the students complete it in pairs.2. The activity is called salt vibrations and it focuses on “seeing sounds.” It involves cutting off the neck of the balloon and stretching it over the plastic cup, ensuring it is secure and will not flick off. Secondly, salt will be sprinkled on top of the balloon. Following on, the educator will play a simple tune off YouTube. The educator will ask students to observe how the salt moves to the sound of the tune. 3. The educator will organise groupings of students prior to the lesson which will be based on ability levels. Each group will involve three people. Once the educator has allocated all students to their groups, students will determine their role.Manager – collects all equipment and returns it.Speaker – asks the teacher and other team speakers for help.Helper – collects group member’s science journals.4. The allocated time given for the activity is fifteen minutes.5. When fifteen minutes is completed, the managers for each group will return all materials and all students will locate back to their desks, with their science journal ready.**Conclusion:**1. Once all students are ready to begin the final part of the lesson, the educator will specify to students how they must explain their understanding of sound and vibrations in a written summary or picture format in their science journal. 2. Think-Pair-Share: After students have finished documenting their answer, the educator will invite students to sit with someone who has the same first letter of their name to discuss their response. The educator will then invite students to share their responses.Safety Considerations:* Students will be reminded to not taste the salt, only to observe with their eyes.
* A YouTube Link will be programmed prior to the lesson to ensure online safety for students.
 | Before**:***How do you think sound is produced?**What are some examples of sound?*After:*What items produced sound and vibrations in the book?**What are some descriptive words we could use to describe vibration and sounds?* | *Vibrations Make Sounds* by Jennifer BoothroydColourful pens for Word WallPlastic cupsBalloonsSalt shakersScissorsiPad**Science Journal****Timer** |

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| **5E’s- ELABORATE (1-2 lessons)*** To challenge and extend students’ understandings in a new context or make connections to additional concepts through a student planned investigation
* To use investigative/ inquiry skills
* Summative assessment of science inquiry skills
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| **WEEK/****LESSON** | **EYLF****Prin Prac O/C** | **AUSTRALIAN CURRICULUM** **LINKS** | **SPECIFIC LESSON****OBJECTIVE** | **ASSESSMENT****(what & how)** | TEACHING & LEARNING EXPERIENCES(include learner diversity) | **KEY****QUESTIONS** | **RESOURCES** |
| 4-4 | **2.****5.** | **3.** | **4.** | Light and sound are produced by a range of sources and can be sensed [(ACSSU020)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acssu020)Use Informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate (ACSIS026)Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources [(ACSIS025)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acsis025) | 1. Work and participate collaboratively with a peer by exploring how sound travels from one cup to the other (ACSIS025)2. Record the outcome of the investigation on Photo booth (on iPad)(ACSIS026) | **Summative****Science Inquiry Skills**The educator will record anecdotal notes as each pair presents their video to another group, based on the two objectives. | **Introduction:**1. Students will gather onto the mat.
2. The text, Sending Messages with Light and Sound by Jennifer Boothroyed will be read to the class.
3. As a class, students will discuss what kinds of phones they have recently seen around their homes or what their grandparents used.

Educator Notes:**Sound** can move through the air, water, or solids, if there are particles to bounce off.**Lesson Body:**1. Students will be given a challenge to create a string phone and test it.
2. The educator will organise students prior to the lesson based on ability levels. Each group will be given 2 paper cups and string. The educator will poke holes in the cups prior to the lesson (safety consideration).
3. After successfully creating the string phone, students will discuss and plan their findings of how sound travels. Students will have the opportunity to note down their answers in their science journals.
4. Following on, students will record the outcome of the activity using iPad and the application Photo booth.

**Learner Diversity:**The educator will organise the weaker students to be partnered with the confident/advanced students to support each other during the activity.**Conclusion:**Each pair will choose another pair to team up with and share their video presentation.  | Did phones exist twenty years ago? | *The text -* Sending Messages with Light and Sound by Jennifer BoothroyedItems per group:1. 1 iPad
2. 2 paper cups
3. 1 piece of string
4. Science Journal
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| **5E’s- EVALUATE (1 lesson)*** To provide opportunities to review and reflect on their learning about light and sound and represent what they know about light and sound
* Summative assessment of science understanding
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| **WEEK/****LESSON** | **EYLF****Prin Prac O/C** | **AUSTRALIAN CURRICULUM** **LINKS** | **SPECIFIC LESSON****OBJECTIVE** | **ASSESSMENT****(what & how)** | **TEACHING & LEARNING** **EXPERIENCES****(include learner diversity)** | **KEY****QUESTIONS** | **RESOURCES** |
| 5-5 | **5.** | **7.** | **2.4.** | Light and sound are produced by a range of sources and can be sensed [(ACSSU020)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acssu020)Use a range of methods to sort information, including drawings and provided tables through discussion, compare observations with predictions [(ACSIS027)](https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/codes/science/year-1/acsis027) | 1. Identify one example of source of light or sound whilst exploring the school.2. Represent their example by drawing it and discuss with a peer. | **Summative**Objective One and Two: The educator will use anecdotal notes to assess students understanding about the topic.**Formative Assessment (Thumbs up or thumbs down):**A checklist will also be completed to represent student’s personal response about their understanding of the topic.  | Introduction: 1. Students will gather onto the mat.
2. The educator will exhibit a range of items that are used for light or sound on a small table at the front of the class
3. Students will need to use the words from the word wall to identify what the item produces. For example, an alarm clock produces loud sounds.
4. As a class, when the educator points to each object, students will need to raise their hand and specify which word from the word wall coordinates the item.

Lesson Body:1. A “mystery” card will be placed underneath each student’s desk which states ‘light’ or ‘sound’ and they must explore the school to try and find an example. All students will be given an allocated time of ten minutes to locate their source.
2. Before the students head out to explore the school, the educator will reiterate about the safety rules all students must consider. All students will be encouraged to create a list of rules for the class as the educator notes them down on the interactive whiteboard. **Learner Diversity**: The students who struggle with this activity, the educator will provide an example of the mystery card and accompany the students to locate it and draw and example.
3. When the allocated time is completed, students will be asked to return to their desks. An A4 piece of paper (folded into four equal parts) will be placed their desk prior to this step by the educator.
4. For sound examples: Firstly, educator will invite students who have a sound example to draw it in the first part of their folded piece of paper. Secondly, students must draw what happens to the sound. Thirdly, students must continue drawing the sound until it reaches an ear (as this is how humans sense sound). It is essential for the educator to encourage students to create their own example of interpreting sound.
5. For light examples: The first and second step is repeated (from the sound example) but the third step must resemble how the light source travels to the eye (as this is how humans sense light).
6. Students will have the opportunity to discuss with the person next to them about their drawing.
7. Students will glue their folded piece of paper to their personal science journal, ready for the educator to assess.

Conclusion:1. To conclude the lesson, students will be invited to record their personal response about light and sound. Students will be encouraged to reflect in an honest way. 2. Students will be invited to use their hands to indicate their understanding about the topic. Thumbs up represents, ‘I can do this!’ Thumbs sidewards represents ‘I’m almost there!’ Thumbs down represents ‘I don’t understand.’Safety Considerations:* A list of rules will be created for the class to follow whilst exploring the school.
 |  | Word Wall* Alarm Clock
* Mini Hand Drum
* Tea light candle
* Lamp
* Torch

Interactive Whiteboard20 x pre folded pieces of paperPersonal Science Journal |