

# The Mary Brooksbank and George Bass Science Framework

*Planning, programming and assessing Science for  
students with disability*



## Natural Environments

Natural Environment	Syllabus Outcome
Identifies that the way objects move depends on a variety of factors. STe- 6NE	

**Syllabus Indicator 1:** Observes the way a variety of familiar objects move, eg sliding, rolling, spinning and bouncing on the ground.

Framework Indicators	Teacher Language
<b>6NE1A:</b> Observes the way a variety of familiar objects move, eg sliding, rolling, spinning and bouncing on the ground	<p><b>Give an instruction</b></p> <p><i>SN, look at the ball, it is bouncing.</i></p> <p><i>SN, look at the toy, it is spinning.</i></p>

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*The definition for observe in this instance means the student is making eye contact with familiar objects that move. This may require full physical support and student's observations may or may not be intentional.*

## Teaching Activities

### **6NE1A: Observes the way a variety of familiar objects move, eg sliding, rolling, spinning and bouncing on the ground (Syllabus Indicator)**

Students accessing this framework can achieve this indicator as it is written. For this activity it may be necessary for teachers to manipulate the environment. This may include physically placing a student where they can see a bouncing ball or a spinning toy. Additionally, full physical support may be needed to direct the student's eye gaze so they are actually looking at the moving object. Whilst doing this the teacher would state 'SN, look at the ball, it is bouncing', 'SN, look at the toy, it is spinning'.

### **Websites**

Websites that contain resources, games or activities that could be used to support this goal include:

- How things move:  
<http://schoolmediainteractive.com/view/object/clip/158C596A7075B5109835D1467BBFCF05/02>

Natural Environment	Syllabus Outcome
Identifies that the way objects move depends on a variety of factors. STe- 6NE	

**Syllabus Indicator 2:** Identify that the way an object moves depends on its size and shape eg tennis balls and block.

Framework Indicators	Teacher Language
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**6NE2A:** Engages with objects that can be moved by touch

**Give an instruction.**

*SN, look the (object) is moving, it can move.*

*SN, move the (object), you are moving (object).*

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

## Teaching Activities

### 6NE2A: Engages with objects that can be moved by touch

Through the use of repetitive language and explicit or incidental teaching opportunities we are teaching that objects can be moved through touch. This can be achieved by using any moveable objects such as a ball, a spinning toy, a drink bottle or a book. The teacher would place an object in student's view, move the object and make appropriate observational statements.

'SN, look the ball is moving, it can move'.

'SN, move the drink bottle, you are moving the drink bottle'

*Websites that contain resources, games or activities that could be used to support this goal include:*

Labyrinth Lite Edition



10 pin shuffle



Natural Environment	Syllabus Outcome
	Observes, using their senses, how daily and seasonal changes in the environment affect them and other living things. STe- 7NE

**Syllabus Indicator 1.1:** Describes how people respond to familiar changes in their environment, eg day and night and seasonal changes.

Framework Indicators	Teacher Language
<b>7NE1.1A:</b> Reacts/responds to a hot/cold stimulus	<b>Give an instruction</b> <i>Look at the (object).</i>
<b>7NE1.1B:</b> Discriminates between objects that are hot and cold	<i>SN, which one is cold/hot.</i> <i>SN, this feels hot/cold.</i>
	<b>Correction/prompt</b> <i>This is the hot/cold (object).</i> <i>Try again.</i>

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*There are a variety of acceptable ways a student can indicate a choice or make a response. These include; head/physical movements (e.g. nodding, pointing and reaching), facial expression, eye gaze, vocalisations and/or verbal responses.*

## Teaching Activities

### **7NE1.1A: Reacts/responds to a hot/cold stimulus.**

During this activity we are not only looking for reactions and responses to hot/cold. Through the use of repetitive language we are also explicitly teaching the concept of hot/cold. In order to do this teacher language will be limited to using the terms 'hot' and 'cold' even though items used will be at safe and appropriate temperatures. Care and common sense should be used at all times in order to maintain student safety and to adhere to WHS policies. Consideration must always be given to individual students and whether activities are suitable, appropriate and meaningful to them.

Place a hot/cold object (eg hot water bottle/cold pack) in contact with the student's skin and state 'SN, this feels hot/cold.' Move the object to different parts of the student's body and repeat 'SN, this feels hot/cold.'

The student may react in different ways including vocalisations, moving away or keep body part in contact with the stimulus. Immediately restate to the student 'SN, it feels hot/cold. You liked/did not like hot/cold on your skin.'

Incidental teaching opportunities may also occur throughout the day. A teacher identifies a student's physiological response to hot and cold and responds by either removing or adding clothing. At the same time the teacher would state eg 'SN you are feeling hot. I am going to help you take your jumper off.'

**7NE1.1B: Discriminates between objects that are hot and cold.**

Place items that are hot and cold and were used in previous activities directly in student's view and ask student 'SN, which one is cold/hot?' It is necessary to repeat the activity a number of times to ensure the student is able to demonstrate their ability to discriminate between objects.

Websites that contain resources, games or activities that could be used to support this goal include:

- Hot and Cold: <https://www.youtube.com/watch?v=DnMSZFQinRo>

Natural Environment	Syllabus Outcome
	Observes, using their senses, how daily and seasonal changes in the environment affect them and other living things. STe- 7NE

**Syllabus Indicator 1.2** : Describes how people respond to familiar changes in their environment, eg day and night and seasonal changes.

Framework Indicators	Teacher Language
<b>7NE1.2A:</b> Responds to darkness	<b>Give an instruction</b> <i>SN, it is dark.</i>
<b>7NE1.2B:</b> Responds to a visual representation of day/night	<i>SN, when it is night time it is dark outside.</i>
<b>7NE1.2C:</b> Discriminates between visual representations of day/night	<i>SN, this is day/night.</i> <i>SN, can you show me day/night?</i>
	<b>Correction/prompt</b> <i>This is the light/dark.</i> <i>This is day/night.</i> <i>Try again</i>

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*There are a variety of acceptable ways a student can indicate a choice or make a response. These include; head/physical movements (e.g. nodding, pointing and reaching), facial expression, eye gaze, vocalisations and/or verbal responses.*

## **Teaching Activities**

### **7NE1.2A: Responds to darkness**

In order to provide opportunities for students to respond to the dark teachers need to create darkened environments. This could be done through the use of a dark tent, an eye mask to block out light or any other environment where there is no light. Teachers should use their professional judgement when interpreting student responses in darkened environments and monitor students for any signs of anxiety or stress at which point the activity should end. This activity can be supported by teacher language such as 'SN, it is dark.'

'SN, when it is night time it is dark outside.'

'SN, night time is dark too.'

### **7NE1.2B Responds to a visual representation of day/night**

Teachers could provide students with opportunities to observe and respond to videos/YouTube clips of an environment during the day and the same environment during the night. This would be supported by showing the student the visual representation of day/night at the conclusion of the clip. Teachers would state 'SN, this is day/night.

### **7NE1.2C: Discriminates between visual representations of day/night**

Place the visual representations of day and night used in previous activities directly in the student's view and ask student 'SN, can you show me day/night?' It is necessary to repeat the activity a number of times to ensure the student is able to demonstrate their ability to discriminate.

Websites that contain resources, games or activities that could be used to support this goal include:

- Light and Dark, Day and Night: <https://www.youtube.com/watch?v=fp5M1qTfvpw>
- Light and Dark: [http://www.bbc.co.uk/schools/scienceclips/ages/5\\_6/light\\_dark.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/5_6/light_dark.shtml)

Daniel Tiger's Day and Night





Natural Environment	Syllabus Outcome
	Observes, using their senses, how daily and seasonal changes in the environment affect them and other living things. STe- 7NE

**Syllabus Indicator 1.3:** Describes how people respond to familiar changes in their environment, eg day and night and seasonal changes.

Framework Indicators	Teacher Language
<b>7NE1.3A:</b> Responds to a visual representation of summer/autumn/winter/spring	<b>Give an instruction</b> <i>SN, this is summer/autumn/winter/spring, it looks like.</i>
<b>7NE1.3B:</b> Discriminates between a visual representation of summer/autumn/winter/spring	<i>SN, can you show me summer/autumn/winter/spring?</i>
	<b>Correction/prompt</b> <i>This is summer/autumn/winter/spring.</i> <i>Try again</i>

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*There are a variety of acceptable ways a student can indicate a choice or make a response. These include; head/physical movements (e.g. nodding, pointing and reaching), facial expression, eye gaze, vocalisations and/or verbal responses.*

*It is important to make sure that visuals that are presented to students that are different enough to allow students to discriminate.*

## **Teaching Activities**

### **7NE1.3A: Responds to a visual representation of summer/autumn/winter/spring**

Teachers would provide students with opportunities to observe and respond to videos/YouTube clips of a particular environment such a garden during each season. This would be supported by showing the student the visual representation of summer/autumn/winter/spring at the conclusion of the clip. Teachers would state ‘SN, this is summer/autumn/winter/spring.

### **7NE1.3B: Discriminates between a visual representation of summer/autumn/winter/spring**

Place the visual representations of each season used in previous activities directly in the student's view and state student 'SN, can you show me summer/autumn/winter/spring?' It is necessary to repeat the activity a number of times to ensure the students are able to demonstrate their ability to discriminate.

Websites that contain resources, games or activities that could be used to support this goal include:

- Seasons of the year: <https://www.youtube.com/watch?v=ksGiLalx39c>

BioMio My First Biology App



Pepi Tree



MarcoPolo Weather



iDress for Weather



Natural Environment	Syllabus Outcome
	Observes, using their senses, how daily and seasonal changes in the environment affect them and other living things. STe- 7NE

**Syllabus Indicator 2.1:** Identify how plants and animals respond to changes in the environment eg trees losing their leaves and the thickness of animals fur.

Framework Indicators	Teacher Language
<b>7NE2.1A:</b> Responds to visual representations of plants or real plants	<b>Give an instruction</b> <i>SN, this is a plant. This is what this plant looks/feels like.</i>
<b>7NE2.1B:</b> Discriminates between representations of plants, either real or visual and non-plants	<i>SN, can you show me the plant?</i>  <b>Correction/prompt</b> <i>This is the plant.</i> <i>Try again.</i>

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*There are a variety of acceptable ways a student can respond. These include; head/physical movements (e.g. nodding, pointing and reaching), facial expression, eye gaze, vocalisations and/or verbal responses.*

*Wherever possible teachers should use real plant material. When using a real plant allow students to touch if possible.*

## **Teaching Activities**

### **7NE2.1A: Responds to visual representations of plants or real plants**

Teachers could provide opportunities for students to respond to plants in their natural environment when moving around the school. Draw the students' attention to a plant and state 'SN, this is a plant. This is what this plant looks/feels like'. Teachers could also support this activity in the classroom by again providing students opportunities to respond to real plants as well as visual representations of plants.

### **7NE2.1B: Discriminates between representations of plants, either real or visual and non-plants**

This activity is designed to provide students with opportunities to discriminate between plants and non-plants. This activity can be done either by using real plants and non-plants or visual representations of plants and non-plants. Teachers would place a real plant and a non-plant item (e.g a drink bottle, a toy) within the student's direct view. Teachers would then state 'SN, can you show me the plant?' The same could be done when using visuals. The activity should be repeated a number of times to ensure the students are able to demonstrate their ability to discriminate between plants and non-plants.

Websites that contain resources, games or activities that could be used to support this goal include:

- Plants and animals in the local environment:  
[http://www.bbc.co.uk/schools/scienceclips/ages/6\\_7/plants\\_animals\\_env.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/6_7/plants_animals_env.shtml)

BioMio My First Biology App



MarcoPolo Weather



GazziliScience



Seasons and weather! Science educational games and activities for kids in preschool and kindergarten by I learn with



Category carousel



Axel Scheffler's Flip Flap Farm



Natural Environment	Syllabus Outcome
	Observes, using their senses, how daily and seasonal changes in the environment affect them and other living things. STe- 7NE

**Syllabus Indicator 2.2:** Identify how plants and animals respond to changes in the environment eg trees losing their leaves and the thickness of animals fur.

Framework Indicators	Teacher Language
<b>7NE2.2A:</b> Responds to visual representations of animals	<b>Give an instruction</b> <i>SN, this is a (specific animal).</i> <i>It is an animal.</i> <i>Look at/feel this animal</i> <i>SN, feel this animal.</i> <i>It feels like a (specific animal).</i> <i>SN, can you show me the animal?</i>
<b>7NE2.2B:</b> Discriminates between visual representations of animals and non-animals	<b>Correction/prompt</b> <i>This is the animal.</i> <i>Try again.</i>

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*There are a variety of acceptable ways a student can respond. These include; head/physical movements (e.g. nodding, pointing and reaching), facial expression, eye gaze, vocalisations and/or verbal responses.*

*As it may not be possible to use real animals teachers could use tactile material to support the visuals representations. These could include wool on an image of a sheep, feathers on an image of a bird and a non-animal such as a rock.*

## **Teaching Activities**

### **7NE2.2A: Responds to visual representations of animals**

*As well as the teaching activities listed below teachers should be aware that students may be able to demonstrate ability to meet these indicators through incidental experiences that may happen outside the classroom. These could include whole school programs such as chick hatching, visits from petting zoos or pets as therapy, where students can respond, identify and discriminate.*

This activity is designed to provide students with opportunities to respond to representations of animals. Place the representation of an animal in the student's direct view and state 'SN, this is a dog. It is an animal. Look at/feel the dog'.

### **7NE2.2B: Discriminates between visual representations of animals and non-animals**

This activity is designed to provide students with opportunities to discriminate between representations of animals and non-animals. Teachers would place a representation of an animal and a non-animal within the student's direct view. Teachers would then state 'SN, can you show me the animal?' It is necessary to repeat the activity a number of times to ensure the student is able to demonstrate their ability to discriminate between representations of animals and non-animals.

*Websites that contain resources, games or activities that could be used to support this goal include:*

- Plants and animals in the local environment:  
[http://www.bbc.co.uk/schools/scienceclips/ages/6\\_7/plants\\_animals\\_env.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/6_7/plants_animals_env.shtml)

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Natural Environment	Syllabus Outcome
	Observes, using their senses, how daily and seasonal changes in the environment affect them and other living things. STE- 7NE

**Syllabus Indicator 2.3:** Identify how plants and animals respond to changes in the environment eg trees losing their leaves and the thickness of animals fur.

Framework Indicators	Teacher Language
<b>7NE2.3A:</b> Responds to visual/audio representations of changes in the environment	<p><b>Give an instruction</b></p> <p><i>SN, you are watching the (change in the environment).</i></p> <p><i>You are listening to (change in the environment).</i></p> <p><i>SN, where is the (change in the environment).</i></p> <p><i>Can you hear the (change in the environment).</i></p> <p><b>Correction/prompt</b></p> <p><i>This is the change in environment.</i></p> <p><i>Try again.</i></p>

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*There are a variety of acceptable ways a student can respond. These include; head/physical movements (e.g. nodding, pointing and reaching), facial expression, eye gaze, vocalisations and/or verbal responses.*

## **Teaching Activities**

### **7NE2.3A: Responds to visual/audio representations of changes in the environment**

*As well as the teaching activities listed below teachers should be aware that students may be able to demonstrate ability to meet these indicators through incidental experiences. This could include drawing students' attention to the changes to the environment and stating what is happening. These changes could include thunder, rain, wind and drought.*

This activity is designed to expose students to the changes in the environment and provide opportunities for students to respond. Teachers would present a visual/audio representation of changes that may occur in the environment. These may be of a thunder

storm, rain, wind, fire or hail. Teachers would then state 'SN, you are looking at/watching a storm. You are listening to the thunder'.

*Websites that contain resources, games or activities that could be used to support this goal include:*

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MarcoPolo Weather



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## Natural environments

## Syllabus Outcome

Identifies the basic needs of living things. STe-8NE

**Syllabus Indicator 1:** Describe what plants and animals, including humans, need to stay alive and healthy, eg Food, water and air.

## Framework Indicators

**8NE1A:** Responds to a real object or visual representation of what plants/animals/humans need

## Teacher Language

### Give an instruction

*SN, you are eating, people need to eat food to survive.*

*SN, you need to come inside because its cold/wet/hot.*

*SN, can you show me the food/water?*

### Correction/prompt

*This is the (survival need)*

*Try again*

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

*There are a variety of acceptable ways a student can respond. These include; head/physical movements (e.g. nodding, pointing and reaching), facial expression, eye gaze, vocalisations and/or verbal responses.*

## Teaching Activities

### Responds to a real object or visual representation of what plants/animals/humans need

Teachers can provide students with opportunities to achieve this indicator in a variety of ways. For the purpose of this we have identified the needs of plants, animals and humans in the following way.

Humans – air, water, food, shelter and sleep

Animals- food, water, shelter, air and sleep

Plant- air, light, water and soil

Opportunities for students to meet this indicator would happen incidentally throughout the teaching day. When eating teachers could state ‘SN, you are eating. People need to eat food.’ Likewise if the weather turned cold/wet/hot and students needed to be moved inside teacher could state ‘SN, you need to come inside because its cold/wet/hot.’

Teachers could support this activity in the classroom by allowing students to observe and respond to the needs of plants, animals and humans through video or YouTube clips. Likewise teachers could use visual representations of the survival needs. Teacher would place the visual representation in the student's direct view and state 'SN, this is shelter. People need shelter to survive'.

Websites that contain resources, games or activities that could be used to support this goal include:

- Animals: [https://www.youtube.com/watch?v=k4UDf3tF\\_O4](https://www.youtube.com/watch?v=k4UDf3tF_O4)
- Plants: <https://www.youtube.com/watch?v=dUBIQ1fTRzI>
- Humans: <https://www.youtube.com/watch?v=7oYTnFNvqO0>

Doctor pets- taking care of baby animals



## Natural environments

## Syllabus Outcome

Identifies the basic needs of living things. STe-8NE

**Syllabus Indicator 2:** Identify the needs of a variety of living things in a range of situations, eg pets at home, plants in the garden or plants and animals in bush land and/or on farms.

## Framework Indicators

**8NE2A:** Observe a variety of living things in a range of situations

## Teacher Language

**Give an instruction**

*No specific teacher language*

*Students will be able to meet this outcome with varying levels of support. Fade this support as the student works toward developing independence.*

## Teaching Activities

### 8NE2A: Observe a variety of living things in a range of situations

The aim of this activity is to provide students with opportunities to observe living things in a range of different environments. This could be done through the use a range of different videos of living things in different environments. These could include a dog drinking from a bowl and wild dog drinking from a lake, a giraffe eating from someone's hand at the zoo and a giraffe eating the trees in the wild, someone watering a garden with a hose and the rain falling in the bush. Teachers would make observational statements to draw student's attention to what they are observing.

Websites that contain resources, games or activities that could be used to support this goal include:

- <http://www.animalatlas.tv/>
- Basic needs of a plant:  
[https://www.youtube.com/watch?v=dUBIQ1fTRzl&list=PLf8VmWXYxe\\_eYbLmfAHy61JAHn-9aGso7&index=2](https://www.youtube.com/watch?v=dUBIQ1fTRzl&list=PLf8VmWXYxe_eYbLmfAHy61JAHn-9aGso7&index=2)
- Basic needs of an animal: [https://www.youtube.com/watch?v=k4UDf3tF\\_O4](https://www.youtube.com/watch?v=k4UDf3tF_O4)

Grow your garden HD



This is my body- Anatomy for kids



GazziliScience



BioMio My First Biology App



Lifecycles

