

The Mary Brooksbank and George Bass Science Framework

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



Made Environments

Made Environments

Syllabus Outcome

Identifies that objects are made of materials that have observable properties. Ste-9ME

Syllabus Indicator 1: Observe, using their senses, a range of materials used to make specific objects products, places and spaces.

Framework Indicators

9ME1A: Observe, using their senses, a range of materials used to make specific objects products, places and spaces

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

9ME1A: Observe, using their senses, a range of materials used to make specific objects products, places and spaces

Opportunities for students to meet this indicator would happen incidentally throughout the teaching day. When cooking students would have the opportunity to observe and explore using their senses the ingredients used to produce a food product. This could include smelling, tasting and touching. Similarly in different environments throughout the school such as playground, sensory rooms and classroom students would have the opportunity to explore these places and spaces with their senses. Teachers could make observational statements that draw student's attention to what they are observing.

'SN, look we are using eggs in the cake.'

'SN, we used honey to make a sandwich. Can you taste the honey?'

'SN, we are sitting on the concrete. It feels hot/cool/hard?'

'SN, we are making pizza. Can you smell it cooking?'

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

Where am I jolly giraffe



Toca Monsters



Jigsaw puzzles



Made Environments

Syllabus Outcome

Identifies that objects are made of materials that have observable properties. Ste-9ME

Syllabus Indicator 2: Group a range of materials on the basis of observable properties, eg flexibility, texture, strength and colour.

Framework Indicators

9ME2A: Explores using their senses a range of materials on the basis of observable properties

Teacher Language

Give an instruction

SN, feel this, this is (property).

SN feel this, this is (property), where is the same?

SN, which is (property)?

Correction/prompt

This is the (property).

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.

Teaching Activities

9ME2A: Explores using their senses a range of materials on the basis of observable properties

Teachers need to provide opportunities for students engage with a variety of materials within their environment. This could involve taking students for a walk through the school environment and drawing attention to what a student may be experiencing.

When in the playground opportunities could include:

When near play equipment teachers could encourage students to touch and look at the different materials the equipment is constructed of. These could include plastic, metal and rubber. Teacher language to support this activity could be as follows:

‘SN, the slippery dip is made of plastic. It is smooth.’

‘SN, the softfall is made of rubber. It is rough.’

Likewise the teacher could draw attention to colour and temperature of the different materials.

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

- Properties of Materials
http://www.bbc.co.uk/schools/scienceclips/ages/5_6/sorting_using_mate.shtml
- Materials song: <https://www.youtube.com/watch?v=xOKr462HLc0>

Category carousel



ABA problem solving- what does not belong?



Sid's Science Fair



PreschoolMM



Made environments**Syllabus Outcome**

Recognise how familiar products, places and spaces are made to suit their purpose.

STe-10ME

Syllabus Indicator 1: Explore a range of existing products, places and spaces, and discuss their likes and dislikes.

Framework Indicators

10ME1.1A: Explore using their senses a range of existing products

10ME1.1B: Indicates likes and dislikes for familiar products

10ME1.1C: Indicates a preference for familiar products

Teacher Language**Give an instruction**

'SN, you are tasting/smelling/feeling (product).'

SN, this is (product), you like (product).

SN, what do you want? Choose.

Correction/prompt

This is the (product/space).

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**10ME1.1A: Explore using their senses a range of existing products**

Opportunities for students to meet this indicator would happen incidentally throughout the teaching day. When eating food students would have the opportunity to explore using their senses, the characteristics of the product. This could include smell, taste and texture. This would be supported with teacher language such as:

'SN, you are tasting chocolate.'

10ME1.1B: Indicates likes and dislikes for familiar products

For these activities teachers need to use their professional judgement and knowledge of the students' likes and dislikes to ensure the student can engage in the activity successfully.

Place an item that is a known preferred product in the student's view and state *'SN, this is*

teddy bear. You like the teddy bear'. This activity would be repeated a number of times with different known preferred products.

Place a product that the student dislikes in the student's view and state 'SN, this is play dough. You don't like play dough'. This activity would be repeated a number of times with different products the student dislikes to consolidate student's understanding of the concept of dislike.

It is important to allow the student some time to play with or use the products they like with each choice. This ensures that the student is rewarded for indicating like, encourages them to do so in subsequent activities and consolidates their understanding of the concepts of like and dislike.

10ME1.1C: Indicates a preference for familiar products

Place a known preferred familiar product together with a familiar product the student dislikes in the student's view and state 'SN, which one do you want? Choose'. This activity would be repeated a number of times with different preferred and non preferred products to allow students to demonstrate a preference.

It is important to allow the student some time play with or use the products they like with each choice. This ensures that the student is rewarded for showing a preference, encourages them to do so in subsequent activities and consolidates their understanding of how to show preference.

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

Where am I jolly giraffe



Going places Functional skills system



Puzzle me 2



Made environments**Syllabus Outcome**

Recognise how familiar products, places and spaces are made to suit their purpose.

STe-10ME

Syllabus Indicator 1: Explore a range of existing products, places and spaces, and discuss their likes and dislikes.

Framework Indicators

10ME1.2A: Explores using their senses a range of places and spaces

10ME1.2B: Indicates likes and dislikes for familiar places and spaces

Teacher Language**Give an instruction**

SN, this is (product/space), you like (product/space).

SN, what do you want? Choose.

Correction/prompt

This is the (product/space).

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**10ME1A: Explores using their senses a range of places and spaces**

Opportunities for students to meet this indicator would happen incidentally throughout the teaching day in different environments throughout the school such as playground, sensory rooms and classrooms. Teachers could support this activity by using observational statements such as:

‘SN, you are in the sensory room. It is dark.’

‘SN, it is windy in the playground.’

‘SN, it is noisy in the hall during assembly.’

10ME1B: Indicates likes and dislikes for familiar places and spaces

Students accessing this framework may very clearly indicate likes and dislikes for familiar places and spaces in different ways. These may include obvious enjoyment of being in a particular place or space such as playgrounds, swimming pools and/or sensory rooms. Likewise students may indicate obvious dislike of other places or spaces through facial

expressions, gestures vocalisations and/or behaviours when in these places or spaces.
Teachers could support these responses by using appropriate teacher language that would reinforce what the student was indicating about being in a place or space.

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

Where am I jolly giraffe



Going places Functional skills system



Puzzle me 2



Made environments**Syllabus Outcome**

Recognise how familiar products, places and spaces are made to suit their purpose.

STe-10ME

Syllabus Indicator 2: Identify a variety of materials that are used in a range of existing familiar, products, places and spaces.

Framework Indicators

10ME2A: Responds to a range of materials that are used in existing familiar products

10ME2B: Interacts with a range of materials that are used in existing familiar places and spaces

Teacher Language**Give an instruction**

SN, this is a (product), it is made of (material).

SN, this is made of (material).

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

10ME2A: Responds to a range of materials that are used in existing familiar products.

This activity is aimed to provide students with opportunities to respond to a range of materials that commonly found within the school. Teachers could either gather a range of different products made from various materials from their environment or give opportunities for students to collect their own. The teacher would then allow students to explore the product and state 'SN, this is a spoon, it is made of metal'. This indicator could also be achieved through incidental learning opportunities throughout the day. For example, during a cooking lesson the teacher could draw attention to different utensils used and state what material they are made of.

10ME2B: Interacts with a range of materials that are used in existing familiar places and spaces.

Teachers could take students to familiar places and spaces within the school to explore the different materials used in those places and spaces. Teachers would draw attention to the floors, wall, doors and other specific features of the place or space. Students could be encouraged to feel, move, or make noise within these places and spaces. Teachers could make observational statements about what the student is feeling or seeing.

'SN, feel the carpet. It is soft.'

'SN, feel the metal. It is cold.'

This indicator could also be achieved through incidental learning opportunities throughout the day. For example, during assembly the teacher could draw attention to the floor as they walk into the hall and state and what material it is made of.

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

Jigsaw puzzles



Little Truck Builder Factory- Play and build Vehicles and trucks



Breakfast



Made environments**Syllabus Outcome**

Recognise how familiar products, places and spaces are made to suit their purpose.

STe-10ME

Syllabus Indicator 3: Communicate their ideas about how familiar products, places and spaces work and have features that help them to be useful, eg shoulder straps, zippers, and compartments in a school bag.

Framework Indicators

10ME3A: Explores familiar products and the usefulness of the features

10ME3B: Identifies useful features of familiar products

10ME3C: Indicates that products as features make familiar places and spaces useful

Teacher Language**Give an instruction**

SN, this is the (feature), it (usefulness).

SN, where is the (useful feature)?

SN, go and sit at your desk.

SN, draw me a picture.

SN, turn on the equipment.

Correction/prompt

This is the (useful feature).

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 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**10ME3A: Explores familiar products and the usefulness of the features**

This activity aims to give students the opportunity to engage with a familiar product and its features. Teachers should consider when selecting a product that it can be easily manipulated to demonstrate the usefulness of its feature/s. Products could include, a lunch box with a lid, a backpack with straps, a guitar with strings or an item with a zipper. The teacher would give the student opportunities to explore the product and manipulate its features. Where possible teachers would prompt students to use the features of a product or demonstrate their uses. This could include the student wearing a backpack on their back. Teachers would then draw attention to the main feature, such as straps of the backpack and state 'SN, these are the straps. They keep the backpack on your back'.

Teachers would then manipulate the main feature to disable its usefulness, for example, undoing the straps of the backpack. The teacher would return the backpack to the student and state 'SN, let's put the backpack on. Oh look the straps are undone. The bag won't stay on your back'.

10ME3B: Identifies useful features of familiar products

Teachers could provide opportunities for students to identify the useful features of familiar products. It is important that the same products used in the previous indicator are used again. Teacher language could include:

'SN, where is the zipper?'

'SN, where are the straps?'

'SN, where is the lid?'

10ME3C: Indicates that products as features make familiar places and spaces useful

This activity aims to give students the opportunity to indicate they understand the usefulness of products in familiar places and spaces. Teachers need to choose products, places and spaces that are motivating to the student. Some ways that teachers can provide students with opportunities to do this are listed below.

In a classroom the chairs are all stacked in a corner. Teacher states 'SN, go and sit at your desk.' If the student displays behaviours that indicate they are looking for chair, or asks for a chair or gets a chair and takes it to their desk they have demonstrated an understanding of how that product makes that space useful.

In the playground where students have access to a chalkboard the teacher moves all the chalk away or holds the chalk so that it is visible to the student. The teacher would encourage the student to draw. Teacher may state 'SN, draw me a picture.' Again if the student tries to get the chalk they are demonstrating an understanding of how that product makes that space useful.

A student with limited mobility and no verbal communication uses a switch to turn on a piece of sensory equipment. The teacher moves the switch out of the student's reach whilst the student is positioned near the piece of sensory equipment. Teacher states 'SN, turn on the equipment.' If the student displays behaviour such as eye gaze or gestures in the direction of the switch they may be demonstrating an understanding that the product, being the switch, makes the space useful by turning on a piece of equipment.

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

Little Truck Builder Factory- Play and build Vehicles and trucks



Build-it-up



In the kitchen



Made environments**Syllabus Outcome**

Recognise how familiar products, places and spaces are made to suit their purpose.

STe-10ME

Syllabus Indicator 4: Sketch or model ideas for a product, place or space and recount how their ideas suit their purpose.

Framework Indicators

10ME4A: Produce a familiar product, place or space from a model

10ME4B: Identifies the purpose of a familiar product, place or space

Teacher Language**Give an instruction**

SN, you are making a (product, place or space).

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**10ME4A: Produce a familiar product, place or space from a model**

For this activity students will replicate a product, place or space from a model provided by the teacher. This may be a ball out of play dough, a house built from paddle pop sticks or a diorama of the seaside. Visual representations can also be used. These could include tracing activities and jigsaw puzzles of products, places and spaces. Whilst completing these activities teachers would state 'SN, you are making a house'. At the same time teachers would also state the purpose of the product, place or space.

10ME4B: Identifies the purpose of a familiar product, place or space

Observations of students are necessary to determine when and under what circumstances students are demonstrating that they can identify a purpose of familiar product, place or space. Teachers need to use their in-depth knowledge of students' behaviours as many students working towards this indicator may not be able to verbalise a purpose. However, through observing student's actions, body language and facial expressions teachers may be able to determine when a student is identifying a purpose. Examples of students demonstrating this are as follows.

- A student brings you an empty cup to communicate that they want a drink. Through this they have identified the purpose of the cup is to hold a drink.
- A student getting a chair and sitting down ready for a lesson to start indicates that the student is demonstrating an understanding of the purpose of a chair.
- When a student puts a jumper on because they feel cold, they are demonstrating that the purpose of the jumper is to keep them warm.

- When a student enters a space and turns the lights on, they are indicating that they understand the light switch turns on the lights.
- Taking a lunchbox to the lunch table at lunch time indicates that the student understands that the purpose of the lunch area is for eating.
- If a student moves under a shelter when it is raining, they are identifying that they understand that space will keep them dry.

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

Build-it-up



Build a farm- MokoFarm Lite



SpeakApp 2 lite

