



Learning Languages – Japanese Numeracy Enhanced Plan

This resource is aligned to the New Zealand Curriculum (2007) and provides support for the teaching and learning of literacy and numeracy in preparation for the NCEA Co-requisite. It aims to support those students who are using the NCEA qualification pathway.

Apartment living

Context

This set of activities explores the floor plan of a typical 1K Japanese apartment (one room apartment with kitchen) with Year 9 and 10s. You may wish to use parts or all of these activities throughout a unit of work to make numeracy explicit in your learning area.

Numeracy connections

Operations with Numbers

- » Recognise the degree of precision required for the context.

Spatial properties and representations

- » Connect a 2D diagram (the floor plan) with a 3D construct (the house that the floor plan is built from).

Measurement

- » Use and interpret elements of a diagram.
- » Use the measurement of area to discuss the amount of floor space available in a floor plan.

Achievement objectives

Selecting and using language, symbols and text to communicate

- » Understand and produce information and ideas

Cultural knowledge

- » Recognise and describe ways in which the target culture is organised.
- » Compare and contrast cultural practices.

Participating and contributing in communities

- » Use cultural knowledge to communicate appropriately

Resources:

- » Floor plans <<Attached below>>
- » 1m ruler (activity 3 only)
- » Chalk (activity 3 only)

Prior Learning

This lesson requires ākonga to be familiar with basic hiragana and katakana characters.



1

Activity 1: Sequence of learning



10 min

A Map of the House

Provide ākonga with a copy of Floor Plan A. Have a copy of this floor plan projected onto the whiteboard (if possible).

Ākonga **discuss** in pairs or groups of three:

- » the Japanese word for each room in the floor plan
- » the English translation for the name of each room.

For example: *Ākonga explain to each other how they know what the name of each room is eg “We think that ユニットバス means bathroom because there is a picture of a toilet and a bathtub in there, and バス sounds like bath.”*

As you **circulate the class** to support ākonga, you may wish to:

- » ask ākonga to consider the meaning of the kanji 洗 on the balcony and what this might indicate about the space available in a Japanese apartment
- » discuss Western-style and Japanese-style rooms and LDK.
- » introduce the words ふろば (bathroom) and トイレ (toilet).

As the discussion starts drawing to a close, encourage ākonga from different groups to **write the English translation** of each room onto the floor plan on the whiteboard.

Discuss as a class any translations where there were uncertainties, with particular reference to:

- » ユニットバス – this is a relatively new space-saving concept as Japanese bathing areas and toilets were traditionally always separated (ふろば bathroom, and トイレ toilet).
- » what happens in the げんかん and the amount of space it needs.

Encourage ākonga to share their explanations of how elements of the floor plan helped them make an **informed guess** as to which room it was.

Numeracy connection: *Ākonga can explain the reasonableness of their responses. While this is not a mathematical context, it supports their development of a key idea in the numeracy standard where ākonga explain the reasonableness of mathematical and statistical responses.*

Activity notes: *A floor plan is a map of a house. It is a two dimensional (2D) representation of where you can find a place or room in real life.*

Discuss the words needed to develop a key for people who are unfamiliar with floor plans. Ākonga should identify door, window, and sliding door as symbols that people may require support to interpret.



About the Floor Plan

Share the text below with ākonga. This text is of a Japanese person showing off their home (Floor Plan B) to another person.

Welcome! いらっしゃいませ。

Here is the entryway. こちらは げんかんです。

Please take off your shoes. くつを めいでください。

Please put on slippers. スリッパを はいてください

Here is the kitchen and the laundry こちらは キッチンと だついつです。

To the east of the kitchen is the toilet and the bathroom.
ひがしに トイレと ふろばが あります。

The bathroom is to the south of the toilet.
ふろばは トイレの みなみがわに あります。

The Western-style room is the largest room. It has a bed, dining table and desk.
ようしつは いちばん 大きいへやです。ベッドと テーブルと つくえが あります。

There is a nice, big balcony.
大きくて、きれいなバルコニーが あります。

I often sit here on a sunny day.
はれの 日に ここで よく すわります。

Activity note: *Ākonga may note the use of north, south, east and west. The compass directions are used here as left, right, in front of and behind are all dependent on the direction a person is facing.*

Numeracy connection: *Ākonga use directions to accurately describe the location of a place.*



2

Activity 2: Sequence of learning (continued)

Have ākonga take turns **reading** each line of the text to a partner and **translating** each sentence. As they translate each sentence, they complete *Floor Plan B – Ākonga (in the appendices)* in Japanese and English, identifying the rooms from the text.

Circulate the classroom as they do this activity and help ākonga **identify contextual hints** to translate the text.

As a class, practise the key words for rooms in a house and any spoken aspects of the texts you noticed that ākonga found challenging.

Re-introduce ākonga to *Floor Plan A*. Have ākonga **write a script** (in their target language) describing and promoting this apartment to an interested buyer. As they write their script, ask ākonga to skip every second line on their page so they can edit the script as needed in a later activity (activity 4).

Encourage ākonga to include lots of detail in their description, so that the listener can visualise the layout of the house without seeing the place itself. Ākonga can use the text they have analysed as a template to support their writing.

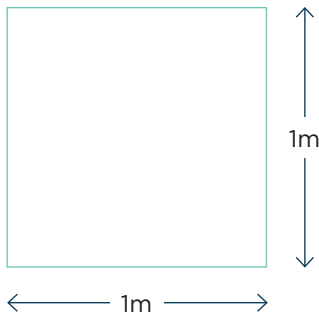
Activity note: *The level of complexity in the script will depend on the ākonga in your class. If you have ākonga who are still mastering the vocabulary, their script may be similar to the comprehension text provided. If you have ākonga who have greater proficiency in Japanese, you may wish to encourage them to use their imagination and embellish their script to upsell the apartment.*



A Square Metre

Activity note: This sequence of learning helps ākonga gain a real understanding of how much space a typical 1K apartment (one room apartment with kitchen) allows a person. The description for this activity is based on a concreted outdoor area. You will need to adjust this according to your context. If you wish to do this inside, you may need to do this as a class activity rather than as a small group.

Draw a 1m by 1m square on the ground:



Ask ākonga to share with the person next to them:

- » what measurement is used to express the amount of space the 1m by 1m square takes up on the ground
- » whether they think this 1m by 1m square is a small amount of space or a large amount of space.

Answers: The measurement that is used to express the amount of space the square encloses is area. Area is the amount of space a two dimensional (2D) shape takes up. A 1m by 1m square takes up 1m^2 (1 metre squared) or 1 square metre. If a shape is 5m^2 this means that five of these 1m by 1m squares fits inside the shape.

Ākonga may respond that this is a small amount of space given the size of the area you are in, or a large amount of space if they are comparing it to a pebble on the ground.

Introduce the task to ākonga: **In groups of three or four**, you will be drawing out the floor plan of the 1K Japanese apartment on the concrete using chalk and a metre ruler (it is recommended that Floor Plan A (in the appendices) is used for this activity).

Numeracy connection: Ākonga use their measurement knowledge to draw a to-scale diagram.

Make sure **ākonga are sufficiently spread out** so their drawings do not impede on each other.

Activity 3: Sequence of learning (continued)

Activity note: *If you do not have sufficient rulers available to ākonga, you can get them to do an estimated measure, for example:*

Each of Maeve's steps are around 1m, so we are getting her to step out the measurement for us. This will not give us the exact size of a Japanese apartment, but it will give us a good enough idea.

Circulate around each of the groups as they begin the task. As the apartments begin to take shape have ākonga:

- » compare the size of each room with the 1m^2 . An interesting point is that a 2m by 2m square creates an area of 4m^2 , which is four times the area of a 1m by 1m square (not twice the size, which they might at first presume).
- » calculate the area of each room¹
- » experience how being in each room with three or four people would feel
- » consider the furniture that might be in each room, and how much space it would take up.

Activity note: *For the final point, you might get ākonga to sketch in some furniture – encourage them to look up some furniture dimensions to include in the floor plan. This [guide](#) provides a size guide for furniture and illustrates how furniture might be laid out in a Japanese apartment.*

Ākonga **record** their area calculation onto their paper floor plan for later use.

At the end of the activity, **encourage ākonga to share their thoughts** on:

- » how living in a space of that size might provide opportunities for the Japanese to develop creative solutions (both simple and high-tech) to maximise their living space
- » how their day-to-day might be shaped by their living space.

Activity note: *many Japanese people who live in Tokyo might prefer to go out rather than socialise in their homes, because it is too small to fit more than 1 or 2 people comfortably.*

¹ These rooms are rectangles and so the area can be calculated by using base $\times$ height. Encourage ākonga to explain to you how they did the calculation – they can also draw out the number of squares that fit into each room to physically show the “square metres” each room is.



Reviewing Your Script

Ākonga **read their script** from activity 2 aloud to a partner. Provide prompts so that ākonga receive peer feedback on:

- » what is good about their script. This could include the accuracy of the language, location and size of the rooms, or use of descriptive language.
- » a change that could be made based on the knowledge they now have on the actual amount of space available in a Japanese 1-bedroom apartment
- » one thing they could add that would elevate the script. For example, they could recommend using a descriptor to help the listener understand how large (or small) the room is.

Literacy connection: *When ākonga read aloud, this allows them to hear if there is anything odd in their writing that requires editing. This supports their literacy development.*

Ākonga **review** their scripts using their peer feedback. Encourage ākonga to make their edits in a different coloured pen.

Activity note: *Prior to ākonga reviewing their script, you may wish to introduce the words:*

大きい	big (with an explanation of the kanji)
小さい	small (with an explanation of the kanji)
ひろい	wide (spatial)
せまい	narrow (spatial)

Ākonga **work in pairs** to decide which set of words would be suitable to describe the floor plans and when it would be appropriate to use the other set of words. Provide ākonga with an **opportunity to practice the words** in different settings.

Next steps in Numeracy learning

To build on this learning, ākonga could:

- » explore the floor plan of a 2-bedroom apartment in Tokyo and how the space impacts how people interact in it
- » compare the amount of space a 1-bedroom flat in New Zealand has with one in Tokyo
- » be introduced to tatami measurements in a traditional Japanese-style room. They might explore how tatami mats are used to cover the floor of an average-sized Japanese traditional room, and the way they fit together. [This resource](#) may be helpful.
- » investigate the cost of an apartment in Japan and the cost of living in Japan.

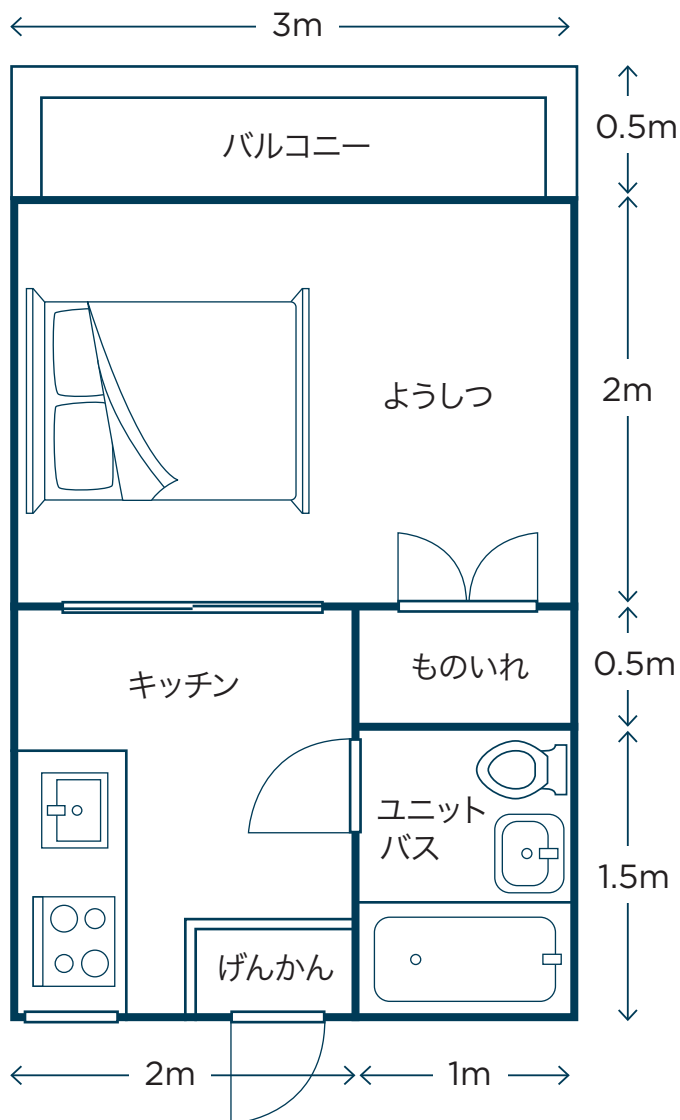
See the [Numeracy Pedagogy Guide for Learning Languages](#) for additional ideas on how to integrate Numeracy learning into your teaching practice.

Floor Plan A

1K APARTMENT

A small 1-bedroom flat with a kitchen space in Japan

The floor plan for recommended use in activities 1 and 2



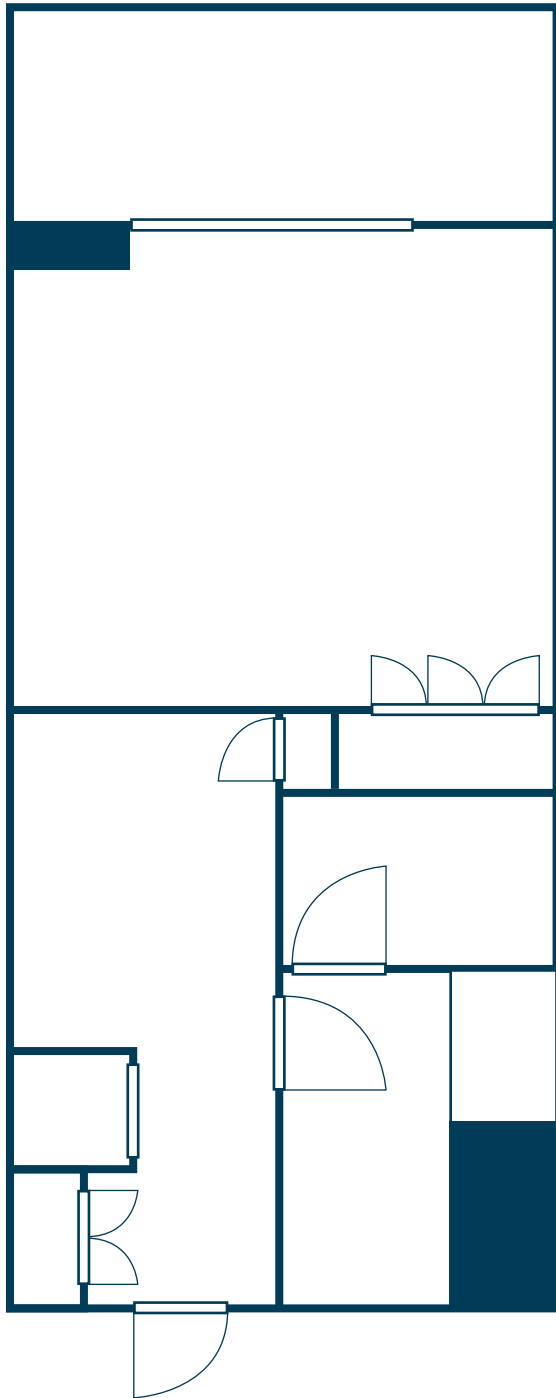
Not drawn to scale

Graphics adapted from [this link](#)

Floor Plan B

1K STUDIO APARTMENT

A studio apartment with one kitchen in Japan

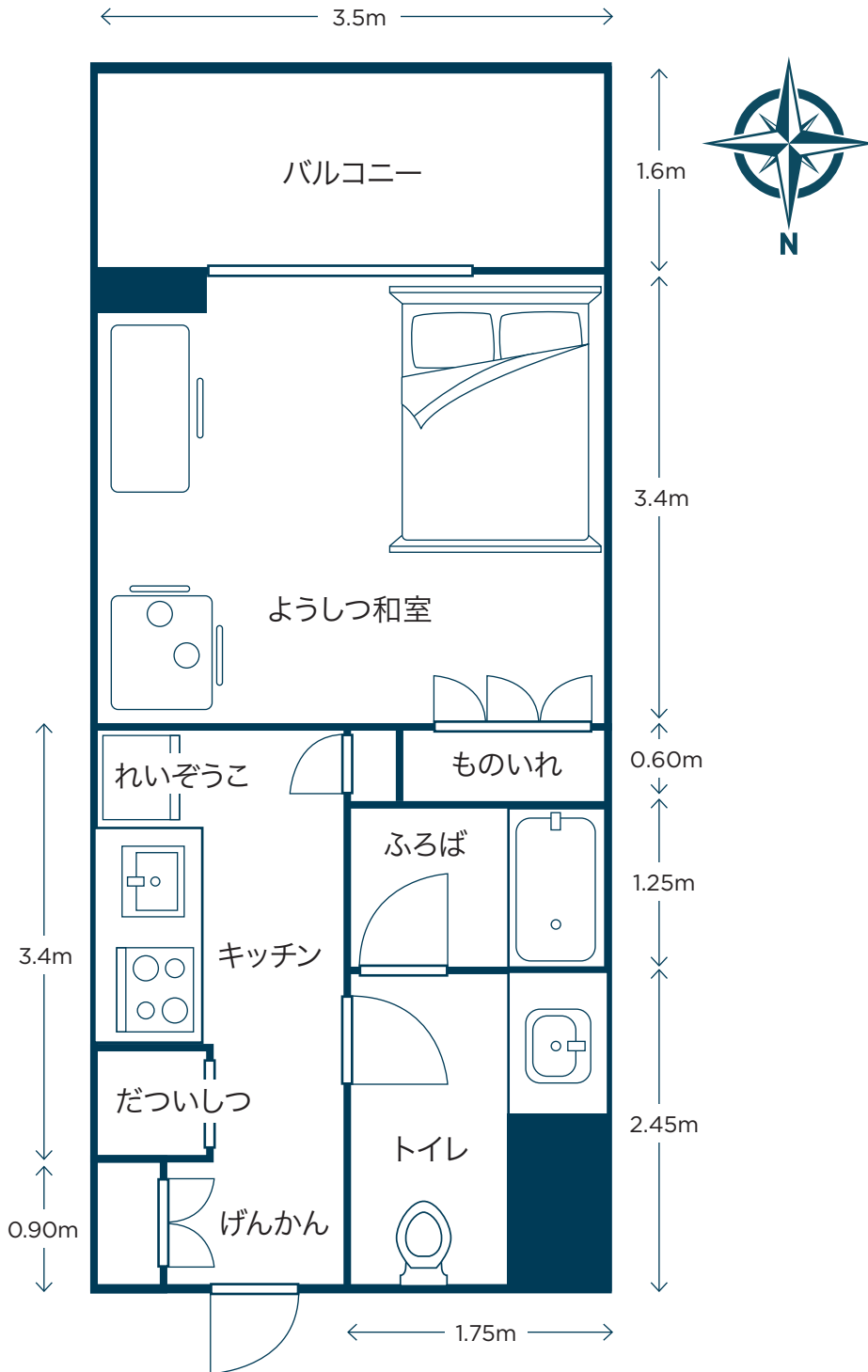


Graphics adapted from [Tokyo Life](#)

Floor Plan C

1K STUDIO APARTMENT

A studio apartment with one kitchen in Japan



Not drawn to scale

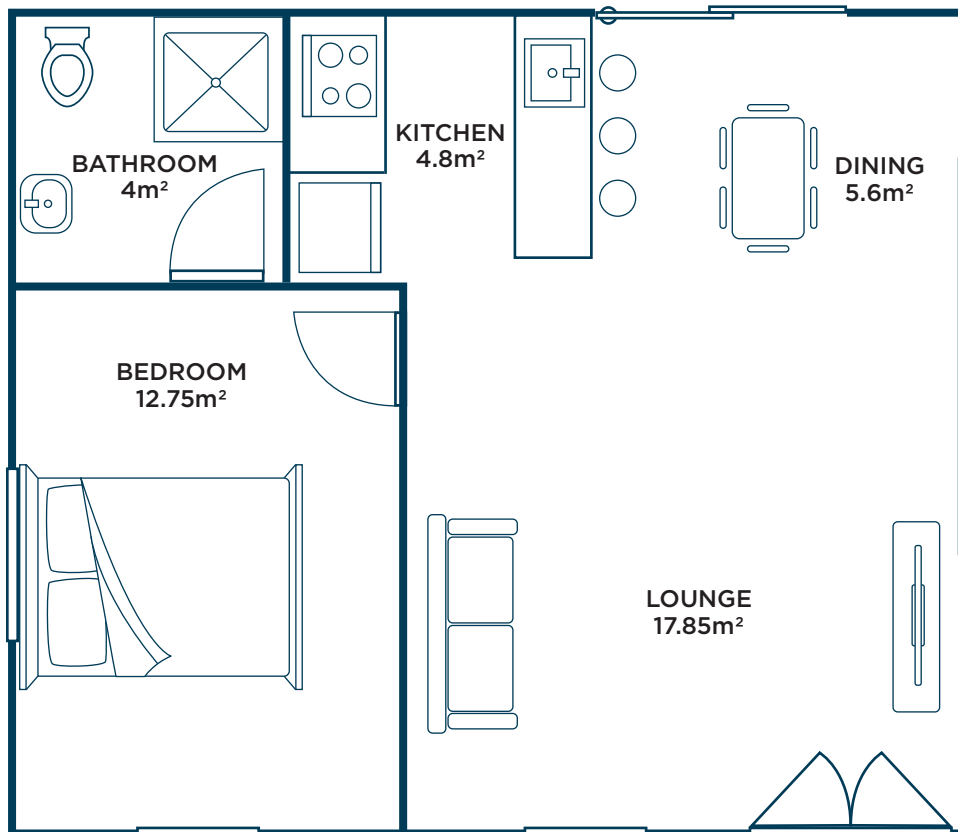
Graphics adapted from [Tokyo Life](#)

Floor Plan D

1 BEDROOM FLAT

A small 1 bedroom flat with kitchen, lounge, and dining area in New Zealand

Can be used to build on learning in this sequence



Not drawn to scale

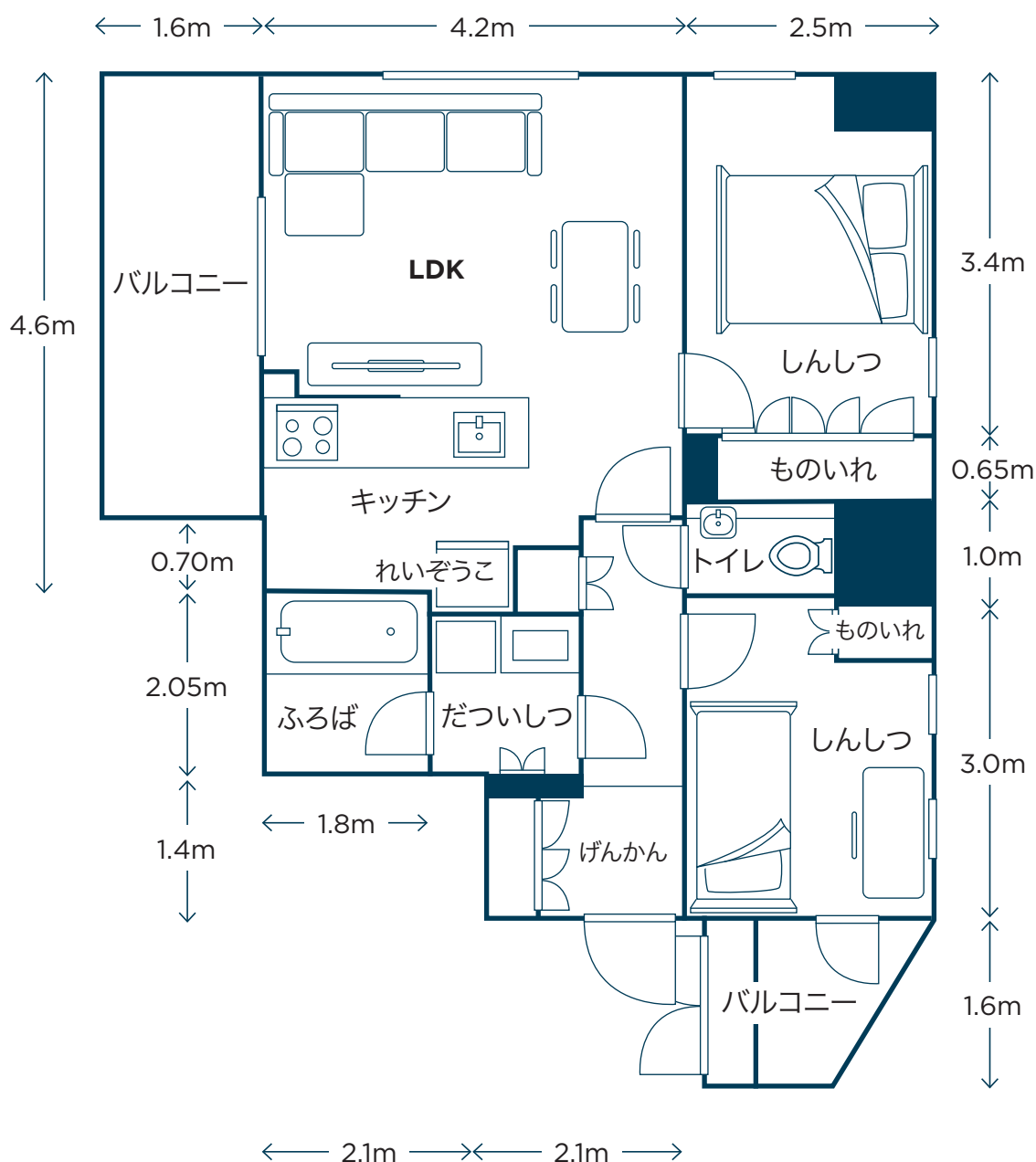
Graphics adapted from [this link](#)

Floor Plan E

2LDK APARTMENT

A 2-bedroom apartment with a lounge, dining area and kitchen in Japan

Additional floor plan



Not drawn to scale

Graphics adapted from [Tokyo Life](https://www.tokyo-life.com/)

Resource

VOCABULARY

バルコニー	Balcony
ユニットバス	Unit bathroom (bathroom with toilet included)
ふろば	Bathroom
しんしつ	Bedroom
もののいれ	Closet
げんかん	Entryway
れいぞうこ	Fridge
ようしつ	Western-style room
キッチン	Kitchen
だついしつ	Laundry room or space
トイレ	Toilet
LDK	Living, dining, kitchen