

## SCIENCE & TECHNOLOGY



### LEVERAGE: MAKE A BALANCING SCULPTURE

#### Year levels:

Prep - Year 3: Teach simple leverage by building a hanging mobile. Using the Nüdel explore how things balance and what happens when you shift the pivot point (fulcrum).

Year 3 - 6: Challenge your student by building up rather than down! Go over terms like fulcrum, effort point, load & lever and test the student understanding by stacking & balancing Nüdel parts on top of each other.

**Extension Ideas:** Explore how levers can be used to make lowering the effort point in order to lift different loads rather than balancing loads.

- ✓ RESILIENCE
- ✓ CURIOSITY
- ✓ IMAGINATION

#### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#), [VCSSU048](#), [VCSSU064](#), [VCSIS037](#), [VCCCTM019](#), [VCCCTM020](#), [VCDSCD029](#), [VCDSCD030](#), [VCDSCD031](#)



### PHYSICS: MAKE A MOVING OBJECT

#### Year levels:

Prep - Year 2: Discuss push and pull. Use wood dowels and straps to try pushing and pulling a variety of objects.

Year 3 - 6: Inquiry into force. Test how to make things move faster and slower. Explore friction building a pulley from Nüdel Kart or Nüdel Rover pieces.

**Extension Ideas:** Write instructions for building your own car that does something amazing. Take it on an adventure and write, storyboard or script a tale of excitement. Interview one of your classmates about their design.

- ✓ INITIATIVE
- ✓ TEAM WORK
- ✓ CREATIVITY

#### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#), [VCSSU048](#), [VCSSU064](#), [VCSIS037](#), [VCCCTM019](#), [VCCCTM020](#), [VCDSCD029](#), [VCDSCD030](#), [VCDSCD031](#)



### TECHNOLOGY: BUILD A MACHINE

#### Year levels:

Prep - Year 2: Decide what machine your school or community could use most. Make the machine out of the Nüdel Kart or Nüdel Rover. Add more recycled materials to your design, such as cardboard or containers.

Year 3 -4: Simple machines such as the lever, wedge, pulley and inclined plane. Trial and use them when creating a machine that moves. Explore gravity.

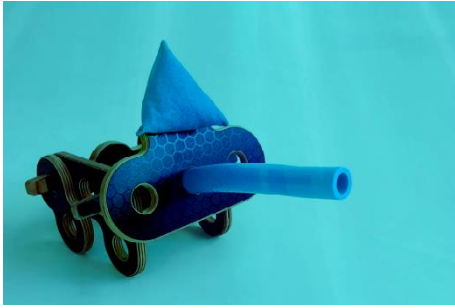
Year 5 - 6: Use scientific knowledge to design a machine to solve a community problem that considers sustainability. Debate whether technology brings people together or separates them.

- ✓ CREATIVE THINKING
- ✓ PROBLEM SOLVING
- ✓ TEAM WORK

#### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#), [VCSSU048](#), [VCSSU064](#), [VCSIS037](#), [VCCCTM019](#), [VCCCTM020](#), [VCDSCD029](#), [VCDSCD030](#), [VCDSCD031](#)

# ENGLISH & DRAMA



## **STORYTELLING: BUILD A CHARACTER**

### **Year levels:**

Prep - Year 2: Be a puppet, animal, robot or other character from a favourite book or film. Create a home for the character and let the characters interact with each other.

Year 3 - 6: Use nouns, verbs & places to develop situations (e.g. cards with a problem such as 'trapped in a lift' plus lots of characters such as 'a ghost' or 'a magician'.) Write a simple narrative to enact.

[Watch an example here](#)

**Extension Ideas:** Think about uses for robots as the Tuning In session to an inquiry about AI and robotic solutions to real problems. Act out futuristic scenarios, asking 'What if?' questions about the robots. (What if they had emotions? What if they took over?)

- ✓ CREATIVE THINKING
- ✓ IMAGINATION
- ✓ COMMUNICATION

### **Linking to curriculum:**

[VCADRE021](#), [VCADRD022](#), [VCADRP023](#), [VCCCTM019](#), [VCCCTM020](#), [VCDSCD029](#), [VCDSCD030](#), [VCDSCD031](#), [VCADRE025](#).



## **STORYTELLING: BE A SUPERHERO**

### **Year levels:**

Prep - Year 2: Talk about the qualities of superheroes. Draw someone they know who is a hero to them. Explain why and enact when using Nüdel Kart or Nüdel Rover

Year 3 - 4: Use Nüdel parts to become superheroes. If you could do something to help others, what would you do? Record your ideas onto a digital device. Listen to everyone's ideas and celebrate them.

Year 5 - 6: Research old comics from the 1940s, or 1950s. Where did modern superheroes come from? What do they tell us about society's concerns and hopes? Create a classroom superhero costume using Nüdel.

- ✓ CREATIVE THINKING
- ✓ CURIOSITY
- ✓ COMMUNICATION

### **Linking to curriculum:**

[VCADRE021](#), [VCADRD022](#), [VCADRP023](#), [VCCCTM019](#), [VCCCTM020](#), [VCDSCD029](#), [VCDSCD030](#), [VCDSCD031](#), [VCADRE025](#).



## **STORYTELLING: PUT ON A SHOW**

### **Year levels:**

Prep - Year 2: Do some miming using Nüdel Parts – other children can guess what/who they are. Relate this to fairy tales and favourite stories if you wish

Year 3 -4: Make a storyboard of the sequence of main events in the performance. How would you film it using short, medium and long shots?

Year 5 - 6: Soapbox persuasions. Explore great persuasive speeches from history (e.g. Martin Luther King's 'I have a dream!' speech) . Look for persuasive devices. Present and record (video) selected techniques using Nüdel Kart or Nüdel Rover as the stage set.

- ✓ COMMUNICATION
- ✓ CONFIDENCE
- ✓ CREATIVE THINKING

### **Linking to curriculum:**

[VCADRE021](#), [VCADRD022](#), [VCADRP023](#), [VCCCTM019](#), [VCCCTM020](#), [VCDSCD029](#), [VCDSCD030](#), [VCDSCD031](#), [VCADRE025](#).

# MATHEMATICS



## FINANCE: DAY AT THE MARKET

Use Nüdel parts as items to sell at a market, use some parts to build stalls & shop fronts.

### Year levels:

Prep - Year 2: Set up a shop, and role play shopping at a market & selling parts. Swap roles.

Year 3 - 4: Use pieces as currency and count, add and tally amounts. Alternatively, using real shopper dockets and brochures, use pieces to represent products and organise them according to price.

Year 5 - 6: Use pieces as currency and count, add and tally amounts - what happens when stock & availability changes prices?

**Extension Ideas:** Inquiry into the origins of money and government. Trade relations and world trade routes now and in the past.

- ✓ COMMUNICATION
- ✓ CURIOSITY
- ✓ IMAGINATION

### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#), [VCCCTQ003](#),



## GEOMETRY: BUILD A BRIDGE OR TOWER

Use Nüdel parts to build a bridge in the classroom or outside!

### Year levels:

Prep - Year 1: Build and measure the tower/bridge with informal units, e.g. hands. Make comparisons - big, bigger, taller etc. Draw big and little things and compare them.

Year 2 - 4: Model your tower or bridge design on a famous one - or match the proportions of what you have built to famous towers/bridges around the world. Locate them on maps.

Year 5 - 6: Test and rebuild using engineering principles, such as a cantilever. Explore the properties of materials and how connecting parts helps with structure.

- ✓ CREATIVE THINKING
- ✓ CURIOSITY
- ✓ PROBLEM SOLVING

### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#), [VCCCTQ003](#)



## ARITHMETICS: BEANBAG TOSS

Use the Nüdel Kart top piece with holes and dowel to make a bean bag toss board. Using masking tape, stick different equations above each of the holes in the board and get students to throw bean bags to reach a target number.

[Watch it in action here!](#)

Prep - Year 1: Practice simple addition & subtraction, by writing on the masking tape (eg. +2, -2, +5, -10, +1). Get students to take turns until they reach a target number.

Year 2 - 6: Practice addition, subtraction, multiplication & division that you are teaching by writing on the masking tape (eg.  $\times 8$ , +7, -3).

Get student to take turns until they reach a target number.

- ✓ TEAM WORK
- ✓ BALANCE
- ✓ PHYSICAL EDUCATION

### Linking to curriculum:

[VCMNA089](#), [VCCCTQ003](#),



# MATHEMATICS



## **PERSPECTIVE:** PLAY WITH SHADOWS

Set up a direct light that points towards a blank wall, make sure the room is dark. Place Nüdel parts in front of the light and see if you can make different shapes & silhouettes by moving pieces closer or further from the light to adjust the scale of the shadow it makes.

[Watch this lesson idea in action here](#)

- ✓ COMMUNICATION
- ✓ CURIOSITY
- ✓ IMAGINATION

**Linking to curriculum:**  
[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#),  
[VCDSCD22](#), [VCCCTQ003](#),



## **ANGLES:** MAKE & PLAY MINI GOLF

Get students to create a mini golf course using Nüdel parts as obstacles and fabric parts as bunkers, and put masking tape on carpet to mark the hole. Get students into teams to build a golf club from Nüdel parts, and get them to compete with each other.

- ✓ CREATIVE THINKING
- ✓ CURIOSITY
- ✓ PROBLEM SOLVING

**Linking to curriculum:**  
[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#),  
[VCDSCD22](#), [VCCCTQ003](#),



## **INQUIRY:** BUILDING DURING PLAY TIME

When playing with Nüdel - students are needing to make calculations, measurements, and angles into consideration. Let your student have some unstructured build time to let their creativity foster while they also put maths into practice.

- ✓ CREATIVITY
- ✓ PROBLEM SOLVING
- ✓ IMAGINATION

**Linking to curriculum:**  
[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#),  
[VCDSCD22](#),

# HUMANITIES



## INQUIRY: BUILD A SHELTER

### Year levels:

Prep - Year 2: Add toys to Nüdel Kart or Nüdel Rover and make a home for them. Discuss animal homes and the different forms they take.

Year 3 - 4: Conduct experiments outside with different materials that could be used for making outdoor cubbies. Include natural materials.

Year 5 - 6: Discuss issues of relocation and the impact on wellbeing. Design a disaster shelter that is weatherproof, can collect water and has a place for growing some food. Research existing disaster relief shelters. Look at disaster ration packs (e.g. from the Red Cross). Consider young, old, mobile, injured people.

- ✓ CREATIVE THINKING
- ✓ IMAGINATION
- ✓ COMMUNICATION

### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#), [VCCCTQ003](#)



## INQUIRY: RUNNING A RESTAURANT

### Year levels:

Prep - Year 2: Set up a café in the classroom using Nüdel pieces. Explore manners, and how we greet people and take orders. Use specialist and technical language of food and restaurants. Bon appétit!

Year 3 - 4: Inquiry into food and community such as how to be a good host / a good guest. How to set a table. Working together to produce a meal.

Year 5 - 6: Research the food system and find out where does our food come from? How is it distributed? Explore sustainable business practices. Design a zero waste restaurant.

[Watch an example here](#)

- ✓ TEAM WORK
- ✓ CURIOSITY
- ✓ COMMUNICATION

### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#),



## INQUIRY: MAKE SOME SOUND

### Year levels:

Prep - Year 2: Group activity where each student in a row must pass the sound on, in a different way using different Nüdel parts from the pile in the centre of the circle

Year 3 -4: Become a band, create a band name & different instruments that make different sounds using Nüdel parts

Year 5 - 6: Explore the art of Foley (sound-making in movies). Create a short movie, practising and including your own Foley such as footsteps, doorbells, sounds of doors opening and shutting, rivers and more

- ✓ TEAM WORK
- ✓ CONFIDENCE
- ✓ CREATIVE THINKING

### Linking to curriculum:

[VCDSCD019](#), [VCDSCD020](#), [VCDSCD021](#), [VCDSCD22](#), [VCCCTQ003](#)