

Learning Through Play

in partnership with LEGO Australia

Teacher Resources

Years 3 - 6



Welcome

Sydney Opera House is one of the indisputable masterpieces of human creativity and has long been a place for learning and sharing knowledge.

The land on which Sydney Opera House stands was known to its traditional custodians, the Gadigal people of the Eora Nation, as Tubowgule, meaning “where the knowledge waters meet.”

A stream carried fresh water down from what is now Pitt Street to the cove near Tubowgule, a rock promontory that at high tide became an island. The mixing of fresh and salt waters formed a perfect fishing ground. Middens of shells were a testament to Tubowgule’s long history as a place where the Gadigal gathered, feasted, sung, danced and told stories.

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Did You Know...?

Sydney Opera House is home to eight flagship Australian performing arts companies which bring art to life every day beneath the famous shells. We are proud to partner with the Australian Chamber Orchestra, Bangarra Dance Theatre, Bell Shakespeare, Opera Australia, Sydney Theatre Company, The Australian Ballet, the Sydney Symphony Orchestra and the Sydney Philharmonia Choirs

130,000 people attend performances at the Sydney Opera House, for young audiences annually. Since 2014, one furry guest has caught the attention of locals and international visitors alike. The northern VIP steps of the Opera House, otherwise unoccupied for the majority of the year, is the favourite sunbathing spot of a wild long-nosed fur seal, affectionately called 'Benny' (named after Bennelong Point).

You can now experience the Opera House, as never before, on Google's digital museum platform with 1270 digital artefacts and 50 interactive online exhibits; the Sydney Opera House's presence on the Google Cultural Institute allows people everywhere to experience the symbol of modern Australia.

The Creative Learning Journey

Before the Workshop

Begin your Creative Learning Journey

Have your students try some of the activities in our Pre Workshop Creative Learning Teachers Resources.

Check out the video links to additional content.

During the Workshop

Engage with the Workshop Videos

This workshop is split into 4 chapters, designed to inspire your classroom activities.

During the video chapters, you will listen and watch as the facilitators explain the concepts and demonstrate the activities.

After each chapter, use the worksheets to conduct the activities as a class.

After the Workshop

Continue the Creative Exploration

Follow up the Workshop with more activities. Can you develop any projects out of the learnings?

Sign up for another Free Event

We offer an annual program of performances, workshops and talks to further extend the learning journey of your students. Free for all Australian Schools and offered throughout the year.

Listen and Watch

Explore the other resources and activities on our website that could support your classroom learning program. See here: www.sydneyoperahouse.com/learn/schools/resources.html

Introduction

These Creative Learning Resources have been prepared to help you get the most out of the Learning Through Play in partnership with LEGO Australia content and workshop experience. These resources have been collated to help prepare your students to unpack the content, think deeply about it and apply it to their continued learning.

You should use and adapt these Resources to suit the student age and stage of your class and the curriculum foci and outcomes used in your school. These resources are written as a creative document for you to bring to life. If you have questions about exercises or provocations please feel free to make contact to talk it through. We are always open to feedback, comments and working with you to assist and learn from you. Contact details are on the back page.

Some websites are suggested throughout this resource. It is recommended that you first review the sites and assess the suitability of the content for your particular school environment before setting the activities based on these.

Sydney Opera House has a bank of Creative Learning Resources for you to access and use. Please have a look around our website for other resources and activities that could support your classroom learning program.

Acknowledgements

Grateful thanks are extended to all the artists and educators who have generously allowed their resources to be included in this document.



Sydney Opera House Creativity Framework

These Creative Learning Resources have been written using the Sydney Opera House Creativity Framework as the pedagogy. The Framework aims to define the creative process in a way that educators can use to teach and be inspired by.

At a glance this Creativity Framework is:

Prepare

Tools and Pathways

Preparing mind, body, space, materials and time

Buy in

Presence and Enthusiasm

Convincing students that they want to be there

Imagine

The Fertile Unknown

Exploring a subject through arts practice. Using form to uncover content. Allowing uncensored expression to reveal new ways of seeing a subject

Question

Analysis, investigation and revelation

Creating new understanding by analysing what just happened when honing the imagination

Make

Forging form from content

Putting shape to content and moving towards a project; scripts, composition, choreography, project design

Show

Commit, frame, judgement

Performing and presenting the work

Reflect

Remembering, Processing, Exiting

Creating understanding and healthy memories from the creative process and product.

Whilst written as a sequence, the Sydney Opera House Creativity Framework is not a method or system but a way of articulating the creative process. As the Framework is applied it becomes apparent the sequence dissolves and many of the specific sections live in one exercise. These resources have been written with this in mind.

This Framework underpins the Sydney Opera House Creative Leadership in Learning program that sees schools partner with the House for three years of teacher professional learning, student projects and performances. For more information please see the Sydney Opera House website.

Meet the Artists

Alison Bennett

Alison Bennett is a clown, actor and performance maker. She has a particular interest in the use of comedy in storytelling and performs across multiple platforms. She is the artistic director of Hurrah Hurrah which creates cutting edge live performance and she teaches at many schools and institutions including NIDA and the Sydney Opera House.

Alison creates live works dedicated to finding the common threads within human existence. Her work is highly physical, visually engaging, experimental and focused on engaging the audience through joy and pathos. Alison is also interested in the integration of technology in live performance and the development of screen projects which focus on local stories.



Curly Fernandez

Curly Fernandez (he/him) is an Australian conceptual artist with an interest in audience participatory processes. He is of Indian and Portuguese ancestry. His work combines disruptive art with social experiments that are incendiary, experiential, and provocative explorations of humanity.

He leads the Leftovers Collective which has performed for the City of Sydney, Mardi Gras, The Powerhouse Museum, The Museum of Contemporary Art and Sydney Opera House. Curly is a specialist creator in hybrid drama techniques, weaving literacy, leadership, and visual arts for young people to unleash creativity through Artistic Anarchy.



Both Alison and Curly have been working with the Creative Learning program at the Sydney Opera House for many years, bringing joy to students and children through both the live and digital programs.

WORLD PLAY DAY

This year, the LEGO Group are celebrating their 90th Anniversary by dedicating a day to the joy and benefits of play – World Play Day. LEGO Australia will celebrate 90 years of play by making the world a playground.

People of all ages will be invited to join the PLAY HOUR (and a half!) movement – a reminder to everyone of the value and importance of play – building confidence and resilience, bringing about mindfulness and joy, and developing connection and skills in creativity and collaboration.



Learning Through Play: Digital Workshop

What greater playground is there than our very own Sydney Opera House! We have teamed up with Sydney Opera House partner, LEGO Australia, to mark World Play Day and investigate how Jorn Utzon used many of LEGO Groups Play Pillars in his design principles.

The 4 chapter digital workshop is designed to be conducted across a 45 minute period (leaving your students with a few extra minutes for PLAY HOUR!). The workshop can be watched on demand and helps your students discover the importance of play.

As a class, watch Chapter 1 and then use the worksheets to guide you through the activities before you begin Chapter 2!



Before the Workshop

"Get Readies"

Getting ready to play can be helpful in letting students let their imaginations open up, especially for older age groups. The 'get readies' are simple things to do just before you play, so that everyone knows it's play time. This is essentially a super short warm up and a simple trick to set the tone.

We gave a couple of demonstrations throughout the workshop chapters:

Chapter 1:

Chapter 2:

Ha!

In this activity students sit in a circle, and the goal is to establish focus and not to laugh. The first student nominated will say "Ha", the person the right then repeats the "Ha" and adds a "Ha", this is then continued until every student has had a chance to complete the activity.

Shake it off!

In this activity students will stand in a circle, and as a group shake out each of their limbs (right arm, left arm, right leg, and left leg). They will count down from 10 until they reach 1, and progressively become louder and louder. Extension: After students have shaken out each of their limbs, they are to repeat it counting down from 9, 8, 7, etc.

WATCH A DEMO HERE

Funny faces!

In this activity students will stand in a circle and pass around a facial expression. This can be prompted by the teacher or students can come up with their own facial expressions. For instance, a teacher can call out "excited" students will take it in turns to pass around the facial expression, with the first student creating the facial expression, and the person next to them copying the facial expression, each student will then pass on the facial expression until the entire group has had a turn at the same facial expression. A new expression is then given to the group.

You can watch some of these "Get Readies" here:

Utzon's Design Principle

Chapter 1: Playful Ideas

Jorn Utzon was the Danish architect who designed the Sydney Opera House by responding to a design competition in 1957. He had the task of designing a world class building for an Australia that was still growing in both population and a sense of identity. He had a difficult task. The building needed to meet the demands of both function and form. In other words, it needed to be unique and beautiful, but also be able to function as a world class Opera House. Utzon was different to many others because of two main ideas: he took inspiration from nature, particularly important given the sacredness of the land to its traditional custodians, the Gadigal People of the Eora Nation and his commitment to providing an excellent human experience.

To ensure that the Sydney Opera House harmonised with the land on which it stood and provided inspiration for all who visited it, he developed a set of design principles which would guide both his design, and all changes and improvements to be made to the house in the future. These principles still guide the house today, they are: the building as a symbol, the building as sculpture, form & function, orientation & movement, counterpoint, additive architecture, structural expression, materials, colour, light and acoustics.

Chapter 2: Playful Relationships

By listening carefully to the needs of the building, Utzon was able to create a playful relationship between the natural space in which it stands, now called Bennelong Point but known as Tubuwgale by the traditional custodians, and the building itself. In his inspiration from nature, Utzon created a space that reflected nature, including the famous large white tiles which were sub divided, to represent a leaf. He also maintained nature's colours which is why the colours of the Opera House are concrete, granite and white. He paid close attention to the way the light in the area moved so he could create beauty through the reflection of light on the tiles. The American Architect Louis Khan said 'the sun did not know how beautiful its light was until it was reflected off this building.' The shape of the hall is like that of a white cloud in the sky and the glass wall ribs like birds wings. All of this was created to ensure that the Sydney Opera House remained a place of joy and festiveness for the world to enjoy.

During this workshop, we pair Lego's Play Pillars with the Utzon Design Principles. Below is some additional information.

Prefer to listen, rather than read? [Click here!](#)

Chapter 3: Playful Spaces

Central to his design was the experience of those who would come to enjoy it. He wanted visitors to have an emotional response to the building. In Australia at that time, architecture was mostly functional. The design of a building extending only as far as what was practically needed. Utzon brought beauty and nature to the experience of the Opera House. He wanted to create an atmosphere of being in another world, one which was cut off from the concerns of the busy city behind it. This is why the famous stairs of the Opera House were constructed, 100 metres wide and a plateau on the top where people could stop and take in the breathtaking landscape. He took significant care with details like doors and windows. Ensuring that windows were not constructed in a way which interrupted the building's natural harmony and doors which would open at one speed and then close at another to give the visitor a feeling of ease when entering and exiting.

Chapter 4: Playful Problems

Utzon's design was first proposed in 1957 but the building was not complete until 1973. His vision and attention to detail was of a level never previously seen before in Australia. The building was to be an inspiration to artists, a representation of the Australian spirit and a formidable cultural symbol. The foyer and theatres are covered by the shell which follow the height of their functions. It had spacious car access, disabled access and a flow through the building that was designed to match the natural world and the movement of the shows themselves.

The additive architecture ensuring uniform yet varied appearance encompassing careful geometry and elements for sun and wet weather protection. Embedded within all this, was an acoustic design that excluded noise but reflected sound from the orchestra. Years ahead of noise cancelling ear phones that we enjoy today.

During the Workshop

This workshop is split into 4 chapters, designed to inspire your classroom activities.

During the video chapters, your class will listen and watch as the facilitators explain the concepts and demonstrate the activities. After each chapter, use the worksheets to conduct the activities as a class.

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Chapter 1, Playful Ideas: Word Association

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WORKSHEET 1

Chapter 1 - Playful Ideas

Word Association

Word association is a fun and easy way to free our minds and practise listening. It can come as a surprise that the key to word association is in the listening and NOT in trying to think up a word.

The fun comes when we simply respond to what we've heard. It might make sense and it might not. There is no need to try to think of wild and crazy associations. We don't want to force anything. Just be curious about what is genuinely in our imaginations.

Now that you've watched Chapter 1, it's your turn to do the activity as a class. Begin with a "Get Ready" (see 'Giant Apple Eating' demo at **7:00** in Chapter 1)

ACTIVITY 1: A-B-C

To re-watch the demo with your class, go to **07:29** in Chapter 1!

1. Split the class into groups of 2 or 3 and assign each student a letter (A, B and C)
2. Choose a word to begin the exercise, e.g Banana, Lego or Snake
3. Student A will begin by saying the chosen word
4. Student B will then respond with a word that they associate with A's word. Student C must then respond with a word they associate with B's word.
5. This continues for 1-2 minutes.
6. Repeat the exercise by assigning a new word, then continue to Activity 2.

ACTIVITY 2: Themed A-B-C

To watch the demo with your class click here: <https://youtu.be/cWdoXV25w4s>

1. Keep the class in the same groups from Activity 1
2. This time, choose a theme to begin the exercise, e.g Monsters, Weather, Science
3. Follow instructions #3 - #5 from Activity 1.
4. Continue to **Chapter 2** of the workshop (or continue to Activity 3 & 4)

Below are some further exercises to help us trust our instinct, develop our listening skills, and rid us of the need to be 'interesting'. (Which can be a huge block to freedom in play)

ACTIVITY 3: Sentence Association

To watch the demo with your class click here: <https://youtu.be/JbW6uusXQWg>

1. Create groups of 2-10 students
2. This time, instead of saying 1 word, students must say 3-5 sentences. Teacher gives Student a the first sentence, or writes it on the board. e.g "There once was a frightened elephant" or "Benny the seal was sitting on a rock at the Sydney Opera House."
3. Student A will begin by saying the first sentence plus 2 more.
4. Student B must respond by adding 3-5 more sentences, followed by Student C, D etc.

Activity 4: Sevens

Everybody stands in a circle. One person stands in the middle. Teacher will give this first person a theme e.g., cars.

The circle will then clap and count to 7. On each number, the person in the middle will say the name of a car. Of course, the person is not likely to be an expert on cars and that is where the fun lies. You just say the first thing that comes into your head.

Important:

Try to keep the rhythm. Teacher should set a pace that is appropriate for the age group. You can set the pace by clapping. No matter what happens during the game, the group should cheer and woop in support.

Activity 3 Tips:

- For groups of 2-4, each student should speak 2 or 3 times, depending on how much time you have. For groups of 5 or more, each student speaks once.
- The challenge of this task is to not reach the end of the story until the LAST person in the group. The teacher may want to call out "Beginning" "Middle" "End" / "Orientation" "Complication" "Resolution" during the activity to guide students.
- Choose a first sentence that's related to something you're currently learning about in your classroom.
- Following this exercise, students could write their own stories.

Activity 4 Example:

Theme: Cars

Group: (speaking and clapping) One

Middle person: big car

Group: Two

Middle person: little car

Group: Three

Middle person: blue car

Group: Four

Middle person: yummy car

Group: Five

Middle person: Mum's car

Group: Six

Middle person: ice cream car

Group: Seven

Middle person: funny car

Group: Cheering, clapping, congratulating

Middle person: Steps back into the circle and gives the next person a new theme.

WORKSHEET 2

Chapter 2 - Playful Relationships

Listen and React

Play can build a strong sense of trust. If we allow another person's idea to expand by supporting, it with our own idea, then both parties are validated, and our ideas are realised. This promotes a strong sense of self worth (which makes games more fun) and deepens the relationships between the players. You can imagine how helpful these skills would be on group projects!

Now that you've watched Chapter 2, it's your turn to do the activity as a class. Begin with a "Get Ready" (see "Body Shake and Tap" demo at 3:00 in Chapter 2)

Activity 1:

Re-watch the demo of this activity at **03:25** in Chapter 2.

1. Split the class into groups or 2: Student A and Student B
2. Each group chooses a location or the teacher can assign one. E.g a hospital
3. Student A chooses a person who you would usually find in this place, e.g a Doctor
4. Student B chooses a someone to enter the location.
5. Student B explains what they want from Student A's character and Student A responds.
6. Repeat the activity, but this time Student B chooses to be an object or animal, rather than a person e.g a clock, a cow, a broom. How might this change what Student B wants and how Student A responds.
7. Continue to Chapter 3 of the workshop. (or find more activities below)

Below you will find two simple games that help students commit to other people's ideas while also allowing space for their own.

Activity 2: Yes Let's

The students start in a space. They can be in a circle or walking around the space. You can even do it sitting down if that's the best option. One person will call out an activity and the rest of the group will respond with a strong and supportive 'Yes Lets'. Then the whole group will begin miming the activity.

Important:

We need to trust what ever comes into our imagination and ensure that we commit to the other person's idea. If the group is a little shy, then the teacher should choose who will give the offer. If the group is confident, they can simply call out when they have the impulse. Just be sure to remind the students to leave enough time to explore the action before they call out a new idea.

Activity 3: Yes Let's association

Just like in Chapter 1's Word Association activity, we can explore themes in a playful way by associating the Yes Let's ideas. We do this by starting with a theme. Let's say the students are studying the Eureka Stockade, we could make this the theme. It can get noisy so to avoid lots of 'shhhh' and 'be quiet' teacher might put in a clap or another sound, so the students know when to stop playing and listen for the next idea.

Important:

Trust the moments when the group find itself on a new tangent. In other words, we should avoid forcing the students to make associations and rather, let them listen and respond. Keep it snappy so they don't lose momentum.

Activity 2 Example:

Student: Let's all walk on our tippy toes
Everyone responds with YES LET's and then walks on their tippy toes.

Student: Let's all tap the floor
Everyone responds with YES LET's and then taps the floor

Student: Let's all do flossing
Everyone responds with YES LET's and then flosses

Activity 3 Example:

Student: Let's all buy a gold license!
Everyone: Responds with YES LET's
All: Plays buying a gold license, who is buying and who is selling? (they'll figure this out what's happening in the play)

Student: Let's all steal gold from out neighbour!
Everyone: Responds with YES LET's
All: Everyone plays stealing from their neighbour

Student: Let's all find gold!
Everyone: responds with YES LET's
All: They play finding gold

WORKSHEET 3

Chapter 3 - Playful Spaces

Playful Shape Making

Being conscious of space and using space to play in, is essential. We all know that kids (and cats) often prefer the box the toy came into the toy. Playing in space helps us create characters and often leads to funny situations.

For an easy example, if you're on a bus and a very smelly person comes to sit right next to you, what happens? We don't even need to say anything, we can just play with the space. Maybe the person has to hold their breath until the smelly person moves. Maybe the smelly person changes seats but then they come back again. The possibilities are endless.

Now that you've watched Chapter 3, it's your turn to do the activity as a class. Begin with a "Get Ready" from Page X.

Tip: There's no need to do a Get Ready activity if you're continuing on from Chapter 1 or 2 today - your class should already be 'ready' to play!

Activity 1: Creating Spaces

Re-watch the demo for this activity at [03:22](#) in Chapter 3

1. Split the class into groups of 2 or 3: Student A, Student B etc.
2. Student A creates a space with their body e.g a teapot, a slide etc. and names that space
3. Student B creates a new space within or in response to A's space and names it
4. Continue for 1-2 minutes.
5. Follow on to Activity 2

Activity 2: Creating Themed Spaces

Re-watch the demo for this activity at [04:52](#) in Chapter 3

1. Keep the same groups from Activity 1
2. Choose a theme - this can be chosen by the groups or by the teacher e.g Scuba-diving, going to the cinema, visiting Egypt
3. Student A creates a space with their body related to theme and names that space
4. Student B creates a new space within or in response to A's space and names it
5. Continue for 1-2 minutes
6. Continue to Chapter 4 (or see more activities below)

Below you will find a simple game that helps students create playful spaces and work collaboratively on their ideas.

Activity 3: Painting the Picture

Make some space in your classroom to be the 'playing stage'. The students are assigned a space e.g. the school hall, a public swimming pool, a kid's bedroom, the fridge.

They must enter the playing stage one-by-one and describe everything that fills the space. They should remember what the people before them said and add to it. They should use as much detail as possible. It helps if they physically demonstrate their descriptions. By the end, the group should have painted the picture of the space.

If you have a confident group, you could give a space that is not real and let them fill it up (this uses all the skills from previous activities).

Important:

Encourage the students to use their whole bodies to give you a sense of scale, as though the objects really exist in the new space. If someone set up a desk, everyone should walk around the imagined desk and not through it.

Example 1:

Space: The classroom

(ensure you demarcate the space)

Student 1: There is a desk about this size (demonstrates) here and here. There is a huge window over here (walks over to where they imagine the window and maps it out for you)

Student 2: There are big dusty curtains on the window (demonstrating the window that the previous student suggested) and here is the teacher's desk. It is huge is piled up with lots of papers

Student 3: Here are boxes full of paints and texts. The paints have squeezed on and there is paint all over the floor and footprints which go to the desks and the window etc etc.

Example 2:

Space: An Alien Spaceship

Student 1: Over here is a large wall full of buttons that are flashing with strange sounds coming out of them (walks over to where they imagine the wall and maps it out for you)

Student 2: The space is round and there are lots of windows all the way around so the aliens can see outside

Student 3: There are no seats but there are these weird pods that the aliens stand inside of and they are next to all the windows etc. etc.

WORKSHEET 4

Chapter 4 - Playful Problems

Tinkering With the Story

Now that you've watched Chapter 4, it's your turn to do the activity as a class. Begin with a "Get Ready" from Page X.

Tip: There's no need to do a Get Ready activity if you're continuing on from Chapter 1, 2 or 3 today - your class should already be 'ready' to play!

Activity 1: Yes/No Story

Re-watch the demo for this activity at

02:42 in Chapter 4.

1. Split the class into groups of 2:
Student A and Student B
2. Student A will begin telling a story with one sentence.
3. Student B says yes or no. If they say Yes, Student A continues with the story, if they say No, Student A must 'tinker' with the sentence by suggesting an alternative.
4. Continue for 1-2 minutes.
5. Re-do the exercise, switching roles.
6. Unpause the Chapter video to watch the end of the workshop (2.5 minutes)

Activity 2: Post-Workshop Reflection

What was your favourite activity from the workshop?

- Word association?
- Short scenes (the thirsty ant and toothbrush in the café)?
- Making spaces (the teapot)?
- Yes/No story?

Describe why the activity was fun?

What are 5 words that describe how it feels when you are playing?

What do you think the world would be like if there was no play?

BONUS CHALLENGE (FOR BREAK-TIME)

INVENT A GAME!

In our workshop we identified that when we are playing it really helps to listen, to let your mind be free and not try to get things 'right', to use space as well as words and to try things even when we're not sure how to do them (tinkering).

Can you invent your own game? It could be just for one or two people, or for a group. It could remind you of another game but with something special that you add to make it yours. Remember to have a go, even if you're not sure how.

After the Workshop

Over the next seven pages, we have compiled multiple cross-curricular activities that explore learning through play. The activities allow students to engage more deeply with play as a useful and enjoyable skill for learning and also unpacks the content of the digital workshops.

As this workshop promotes play across all facets of the curriculum, we encourage you to incorporate these activities into your maths, science, technology, drama, English and visual art classroom activities.

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Chapter 1

1. What can you combine to create? Jorn Utzon saw naval charts of Sydney which reminded him of areas in Denmark which gave him a sense of upward movement in the sails and the steps from steps he had seen in Mexico and Peru. None of these things really make sense together and yet, without them, we would not have the Sydney Opera House that we have today. Create your own landmark by combining different features from around the world.
2. The Sydney Opera House is home to performances that range from plays, musical performances, dance and now a centre for creativity. In groups design a mini opera house in your school using the spaces that exist in the school by recreating a space. After you have selected your space, sketch what this space could be transformed into on an A3 piece of paper. Present your ideas to your class explaining your choices and explain how the space could be transformed for different performances.

Chapter 2

1. In pairs, use Learning through Play's Tricky Tower (<https://learningthroughplay.com/let-s-play/tricky-tower/>) to create the tallest tower in class. You must work together in pairs, and with your non-dominant hand to create the tallest tower. The pair that creates the tallest tower at the end of the set time is the winner.
2. Using Lego, design and create a model of your choice. This model should use a variety of Lego blocks and be simple enough to be replicated by another individual through verbal instructions. Listening is imperative when you are working with others, so test your listening by working in pairs and taking turns in directing your partner to recreate the model that has been created. Make sure your partner does not look at your original model and compare your models when you have finished.

Chapter 3

1. Using The Stem Laboratory's Famous Landmark Stem Challenge as a starting point (<https://thestemlaboratory.com/famous-landmark-stem-challenge/>) recreate famous landmarks around the world using Lego. When you have built the landmark, write a procedural text explaining how you made it.
2. Using Lego, and Creative Green Living's article How to Make a DIY Fidget Spinner with LEGOs <https://www.creativegreenliving.com/2017/06/how-to-make-diy-lego-fidget-spinner.html>, create a functional fidget spinner that can be used in the classroom space. Once you have mastered the prototype, add your own spin to it, by customising your own.

Chapter 4

1. Imagine another bridge needs to be built to connect to the Sydney Opera House to Kirribilli Point. Using Lego, design a bridge that could be built. Use <https://frugalfun4boys.com/lego-bridge-building-challenge/> for inspiration on how to set this up. Students should consider the design and the load which the bridge can support.
2. Making an Opera House is no mean feat! It takes so many people who are experts in design, engineering, architecture, building, computer science and more to collaborate, work together and solve design problems. Working in groups, use the flashcards published by Legolibrarian (<https://legolibrarian.com/2017/03/11/lego-challenge-disaster-island/>) to build an island. Then, work in your group and use Lego to build items to fix the problems you encounter. As you fix your problems, make sure you take photos of your space to document how it has changed.

Chapter 1

1. Using Lego recreate the Sydney Opera House. When you have finished create your own isometric drawing showing the top view, right side, and left side.
2. Use the Isometric Drawing Tool from the National Council of Mathematics (<https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Isometric-Drawing-Tool/>) to create your own representation of the Sydney Opera House. Compare your isometric creations with the class and discuss your choices.

Chapter 2

1. In his design of the Opera House Utzon created a space that reflected nature, including the famous large white tiles which were sub divided, to represent a leaf. He used tessellation where 2D shapes that fit exactly together to form patterns. Look at the tiles from the Sydney Opera House website. What shapes can you identify that have been used? Use these shapes to create your own tessellations in class using Lego blocks.
2. When Jorn Utzon worked with structural engineer Sir Ovi Aurr to build the Sydney Opera House. Watch Geometry with Eddie Woo (https://www.youtube.com/watch?v=C-U_MeBekJw&ab_channel=SydneyOperaHouse) and in your own words explain how geometry was used to create the Sydney Opera House.

Chapter 3

1. What can you make out of 20 Lego Bricks? Using 20 Lego bricks create the tallest and shortest structure possible using all 20 bricks. Sketch these designs in your book after you have created them.
2. Watch Acoustics with Eddie Woo (https://www.youtube.com/watch?v=okuESUX3obA&ab_channel=SydneyOperaHouse). In your own words explain how echoes are created and used in the Sydney Opera House.

Chapter 4

1. In Maths of the Sydney Opera House with Eddie Woo: Episode 3 Algebra (<https://youtu.be/DaehFGHceTA>) Eddie Woo explains how Utzon used mathematics to tile the Opera House. Explain how he did this.
2. How many Lego bricks would it take to cover an area? Measure the space of your classroom and calculate how many bricks it would take to cover the area of your classroom. Challenge: Can you figure this out for the different brick sizes?

Chapter 1

1. In this workshop, Alison and Curly played word associations. Play “one word at a time story” (<https://www.dramatrunk.com/theatre-game-one-word-at-a-time>) with the class by having 4 members of the class stand up in a line, in order the students will add one word at a time to tell a coherent story. Start with a prompt from the teacher, or class members. These prompts can be a title e.g., The last day on earth, The best day ever, The horrible accident, or words e.g., Hide, happy etc.
2. Extend on “one word at a time story” by playing “one line at a time story”, where participants say a sentence that adds on to the story. As a class choose a title for your story, and each person will say one sentence that flows onto the next. After you have told the story, recreate this story using the Lego blocks and display them around the room.

Chapter 2

1. The Opera House has lots of ‘design opposites’ – Utzon calls these counterpoints. Counterpoint means something that’s different or opposite. When you put these two things together, they somehow just work! Like ham and pineapple on pizza, vegemite and avocado on toast, classical musicians at a rock concert or when unlikely animals become friends, like an orangutan and a Labrador. In pairs, create two objects out of Lego that are opposites. Use these two models to create a storyboard showcasing how the two interact.
2. As a class read about Benny the seal who frequents the Sydney Opera House. <https://www.sydneyoperahouse.com/digital/articles/community/seal-of-approval.html>
Put yourself in the shoes of Benny and write a postcard from Benny to one of his seal friends that tells them about his journey to the Opera House and why they should come and visit.

Chapter 3

1. What can we do with the objects in our spaces? What personality do the objects around us have? Explore the different objects in the space and how they can showcase their personalities. E.g., a stapler could be angry by the speed which it moves through paper, the door could scary as it slams. In your books create write a list of objects in the room and play with the personalities they could have. Choose one of these personalities, recreate the object with their personalities by building it using Lego blocks and present it to the partner by interacting their object/personality.
2. From the previous exercise, write a creative story that reflects the interactions between the two objects. Give your short story an appropriate title e.g., “The day the pencil went on strike”, “The revenge of the door”.

Chapter 4

1. How does it end? Write the beginning of a story where a problem has occurred. After you have written the beginning swap your story with a partner. Your partner will then write the end of the story resolving the problem. Take turns reading the story out loud.
2. The Sydney Opera House is full of creatives. Listen to the podcast “Arty Farty” (<https://www.sydneyoperahouse.com/digital/podcasts/arty-farty-podcast.html>) and from the podcast, create your own list of tips and tricks on how to be creative. Take the list of tips and tricks and turn them into your own class podcast.

Chapter 1

1. In pairs, have one person cover half a baseplate with Lego to create an abstract image. The other person is then to replicate this image to ensure that the full baseplate is symmetrical.
2. Follow the tutorial by Articco Drawing (<https://www.youtube.com/watch?v=iioLSiARa3E>) to draw the Sydney Opera House step by step. Once you have completed this use different mediums (paint, pencil, pens) to colour in the Sydney Opera House.

Chapter 2

1. Using Printable World Lego Mosaic Patterns from Childhood101 (<https://childhood101.com/printable-world-lego-mosaic-patterns/>) work in pairs to choose a mosaic and then create it.
2. How else can Lego be used? Explore how Lego can be used to create prints and collages by using inkpads. Drawing inspiration from The Artful Parent (<https://artfulparent.com/lego-prints-with-legos-and-stamp-pads/>) and The Kitchen Table Classroom (<https://www.kitchentableclassroom.com/lego-prints-robots-of-the-brick/>) create your own artwork by using Lego and Stamp Pads. Be as creative as you like to create different images and use the different Lego sides for different results.

Chapter 3

1. Jorn Utzon was inspired by nature; he was inspired by water, the headlands, sky, clouds, sunsets, and shells. Using the space and nature that surrounds your school, design a new building that could be built in the school. Your new building could serve many purposes like the Opera House and must be reflective of your school's environment.
2. In the workshop Alison and Curly explored simple things from a different point of view like a giant toothbrush in a café. Using this as a stimulus, draw a series of objects from different points of view in your Visual Art Process Diary.

Chapter 4

1. Monster Sky Way: Using Lego Bricks, create your own monsters. Follow the Guide from Learning through Play (<https://learningthroughplay.com/let-s-play/monster-sky-way/>) to create your own small monsters. When you have completed creating your monsters in class, as a class create a skyway that will allow your monsters to move from one place in the room to another.
2. In the design of the Sydney Opera House Utzon wanted to create an atmosphere of being in another world, one which was cut off from the concerns of the busy city behind it. This is why the famous stairs of the Opera House were constructed, 100 metres wide and a plateau on the top where people could stop and take in the breathtaking landscape. He took significant care with details like doors and windows. Ensuring that windows were not constructed in a way which interrupted the building's natural harmony and doors which would open at one speed and then close at another to give the visitor a feeling of ease when entering and exiting. As a class create your own model building that feels that is cutaway from the school using found materials. This structure should be big enough and strong enough that one person can enter it.

Chapter 1

1. Curly and Alison discussed the huge team of creatives and technicians that create a show including lighting designers, stage managers, costume designers and directors. What role do each of these people play in creating a performance? Conduct some research into each of the roles that these individuals have.
2. See the "Get Readies" on Page X

Chapter 2

1. In the workshop Alison and Curly played with relationships by choosing a location and changing characters. In groups, choose a location and give each other different characters to play in the scene just like Alison and Curly. Remember that your example does not need to be realistic, be as creative as you can! Once you have rehearsed your scene, show this to the class.
2. In groups of three play with relationships by "Combining Skills", (Hishon, n.d. <https://www.theatrefolk.com/blog/improv-game-combining-skills/>) in this game students are given three different occupations and a problem to solve. For example, a doctor, a teacher, and a mechanic must work together to extract a tooth. After all the individuals have had a go, students are to reflect on their contributions to the piece in their logbooks.

Chapter 3

1. In groups play "Yes, lets!" (<https://www.dramatoolkit.co.uk/drama-games/item/improvisation/yes-lets>) , start by having the whole class in a circle. One by one the group members will change the space by coming to the centre of the circle calling it out an action e.g. "Let swim laps at the pool" and miming the action, the class will respond by saying "Yes, lets!" and repeating the action. The original person will leave the centre, with the next person offering a new action to perform in the space.
2. How can we create using our bodies? As a class play "Body Objects" (<https://onestopdramashop.com/lessons/body-objects-free-drama-lesson/>) Start slowly by creating simple shapes, e.g., students to create letters from the alphabet in pairs, and as confidence builds students are to create bigger objects e.g., in groups of four create a fountain, a house, the Opera House. Once students have become confident in this, students can begin to animate the objects e.g., moving water in the fountain, a moving bus etc.

Chapter 4

1. Alison and Curly create stories using their bodies. In pairs, you are going to make up a story and use words and your body to tell it. After a few sentences, your partner will say yes or no. If they like the story, they will say yes and you can continue but if they do not, they will say no, and you have to do something else.
2. In groups you will solve problems through play. Sometimes problems are not even problems in fact they are just opportunities so see things in a new way. In groups pretend that you are going for a walk, however there is a large log that is in your way, in groups devise different ways you can overcome this problem. You will say your creative solution to the log out loud and then mime the action you and your group will take. Remember to be as creative as you can here, your answers do not need to be realistic

For Example:

- We are going to build wings and fly over it
- We are going make a hole through the middle of it and climb through it
- We are going to become the strongest person in the world and pick it up
- We are going to be a cyclone blow it away

Additional Resources

From the Sydney Opera House

www.sydneyoperahouse.com/learn/schools/resources.html

www.sydneyoperahouse.com/learn/schools.html

From the LEGO Group

<https://learningthroughplay.com/>

<https://www.lego.com/en-au/90-years-of-play>

Other Resources

Maths of the Sydney Opera House

[Episode 1 - Acoustics with Eddie Woo](#)

[Episode 2 - Geometry with Eddie Woo](#)

[Episode 3 - Algebra with Eddie Woo](#)

[Arty Farty: A Podcast for Kids by the Sydney Opera House](#)

[Beat by Beat Press. n.d. Drama Game: Group Laugh \(Without Laughing\)](#)

[Body Objects - a FREE drama lesson - One Stop DRAMA Shop. \(2015\)](#)

[Burnett, C. Lego Activity Ideas: World Mosaic Patterns](#)

[Cheng, C. Sydney's seal of approval](#)

[Do a LEGO Bridge Building Challenge! - Frugal Fun For Boys and Girls](#)

[Famous Landmarks STEM Challenge](#)

[Hishon, K. Improv Game: Combining Skills.](#)

[How To Draw Sydney Opera House Step by Step](#)

[Isometric Drawing Tool](#)

[Learningthroughplay.com's Monster Sky Way Activity](#)

[Learningthroughplay.com's Tricky Tower](#)

[Lego Challenge—Disaster Island.](#)

[The Sydney Tile](#)

Curriculum Links

KLA	Stage 2	Stage 3
Science and Technology	ST2-2DP-T selects and uses materials, tools and equipment to develop solutions for a need or opportunity	ST3-2DP-T plans and uses materials, tools and equipment to develop solutions for a need or opportunity
	ST2-3DP-T defines problems, describes and follows algorithms to develop solution	ST3-3DP-T defines problems, and designs, modifies and follows algorithms to develop solutions
Mathematics Three-Dimensional Space	MA2-14MG makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features	MA3-14MG identifies three-dimensional objects, including prisms and pyramids, on the basis of their properties, and visualises, sketches and constructs them given drawings of different views
Mathematics Two-Dimensional Space	MA2-15MG manipulates, identifies and sketches two-dimensional shapes, including special quadrilaterals, and describes their features	MA3-15MG manipulates, classifies and draws two dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties
Visual Arts Making	VAS2.1 Represents the qualities of experiences and things that are interesting or beautiful* by choosing among aspects of subject matter.	VAS3.1 Investigates subject matter in an attempt to represent likenesses of things in the world
Visual Arts Appreciating	VAS2.4 Identifies connections between subject matter in artworks and what they refer to, and appreciates the use of particular techniques.	VAS3.4 Communicates about the ways in which subject matter is represented in artworks.
English To think in ways that are imaginative, creative, interpretive and critical	EN2-10C thinks imaginatively, creatively and interpretively about information, ideas and texts when responding to and composing texts	EN3-7C thinks imaginatively, creatively, interpretively and critically about information and ideas and identifies connections between texts when responding to and composing texts
Drama Making	DRAS2.1 Takes on and sustains roles in a variety of drama forms to express meaning in a wide range of imagined situations	DRAS3.1 Develops a range of in-depth and sustained roles.

Let's keep in touch

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