



## Support Resources

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The Rayne  
Foundation



Llywodraeth Cymru  
Welsh Government

# Night Lights

TECHNIQUEST

## Show Summary

Step into Techniquest's planetarium to help our friendly dragon, Delyth, explore day and night, light, shadows and reflection. Join in as Delyth helps her friend Hywel the hedgehog overcome his fear of the light.

This star dome show explores light and shadow through story telling in Techniquest's mobile planetarium and introduces pupils to the stars in the night sky. The show builds on pupils' skills and knowledge to explore light and darkness.



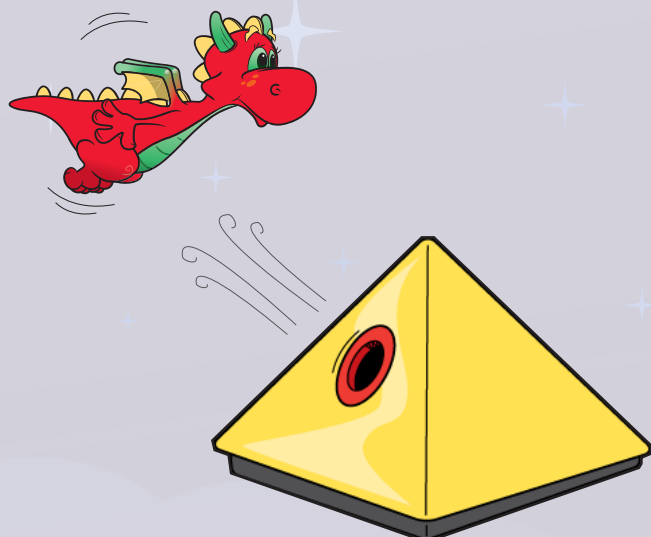
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## Acknowledgements

Special thanks to the Rayne Foundation for their support. Thanks to the pupils and teachers of Kitchener Primary School, Radnor Primary School and Lansdowne Primary School for their support and ideas.

### Photo Fun



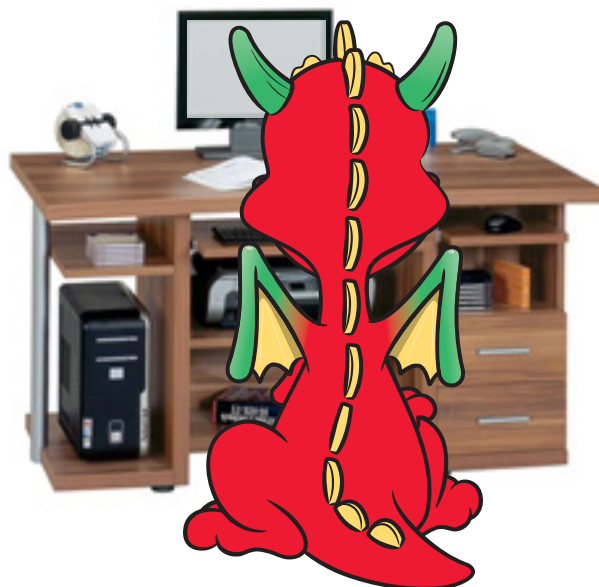
In each of the following photographs, Delyth is asking a question related to the workshop.

- Set pupils the challenge of answering the questions.
- Ask pupils if they remember the object and how it was used in the workshop. What do they remember about it?
- What did they find out from the workshop?
- Pupils could draw a picture of their favourite part of the workshop. They could add thought bubbles, like on the photographs of Delyth, to explain why they liked it.

Pupils can email their thoughts, comments and pictures about their time in Techniquest to:

**[DelythDragon@techniquest.org](mailto:DelythDragon@techniquest.org)**

Delyth will choose her favourite emails and photographs and these will be displayed in Techniquest. Look out for them next time you visit.





# Night Lights

TECHNIQUEST





# Night Lights

TECHNIQUEST



How many of  
me can you see?  
How many mirrors  
are there?



# Night Lights

TECHNIQUEST

What are these  
jackets for?  
How do they  
work?



# Night Lights

TECHNIQUEST

What is this?  
What other light  
sources do you  
know?



## Making Rainbows

### What you need:

- White paint
- Red paint
- Yellow paint
- Blue paint
- Brushes
- Mixing palettes
- Paper

### What you do:

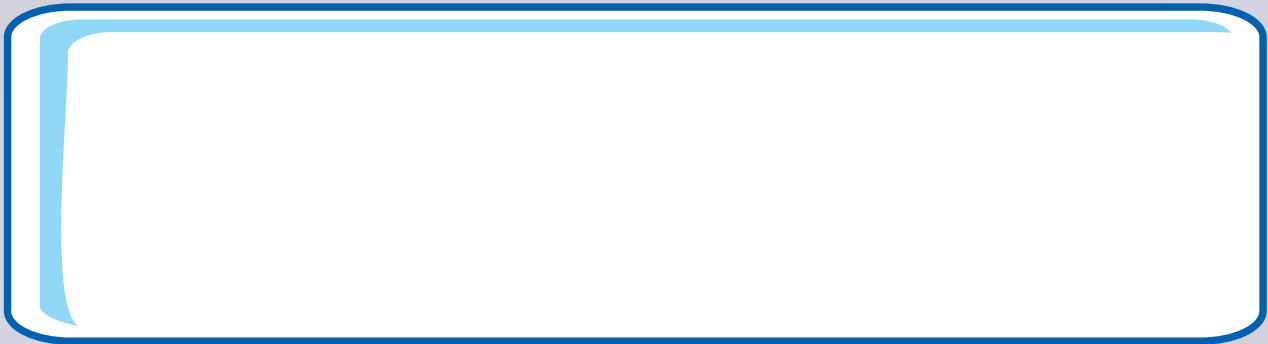
- Can pupils make a rainbow? Challenge them to mix the paints together to make the different colours in the rainbow.
  - Ask pupils to name the colours in a rainbow.
  - Which colours of paint do they have already?
  - Which colours are they missing for their rainbow?
  - How can they make these colours? Which colours will they need to mix?
  - When pupils have mixed all of the colours they need, they can paint a rainbow.
  - What order should they paint the colours? Which colour is on the outside of the rainbow? Which colour is on the inside?
- 
- Why not try experimenting with collage? Challenge pupils to make their rainbows using tiny pieces of paper of different colours. They could use magazines or photographs to get the different colours.





## Night Time

- Think about different animals that come out at night. What animals can you think of? Where do these animals live?
- Find out the word for 'hedgehog' in Welsh.
- Find out the Welsh word for another nocturnal animal that you thought of.
- You could use: [bbc.co.uk/learnwelsh](http://bbc.co.uk/learnwelsh) to help you.
- Write a sentence in Welsh in the large bubble to describe your favourite nocturnal animal and where it lives.



### Shadow Games

Delyth loves playing shadow games with Hywel now he isn't so afraid of the light. Try this game out with the class.

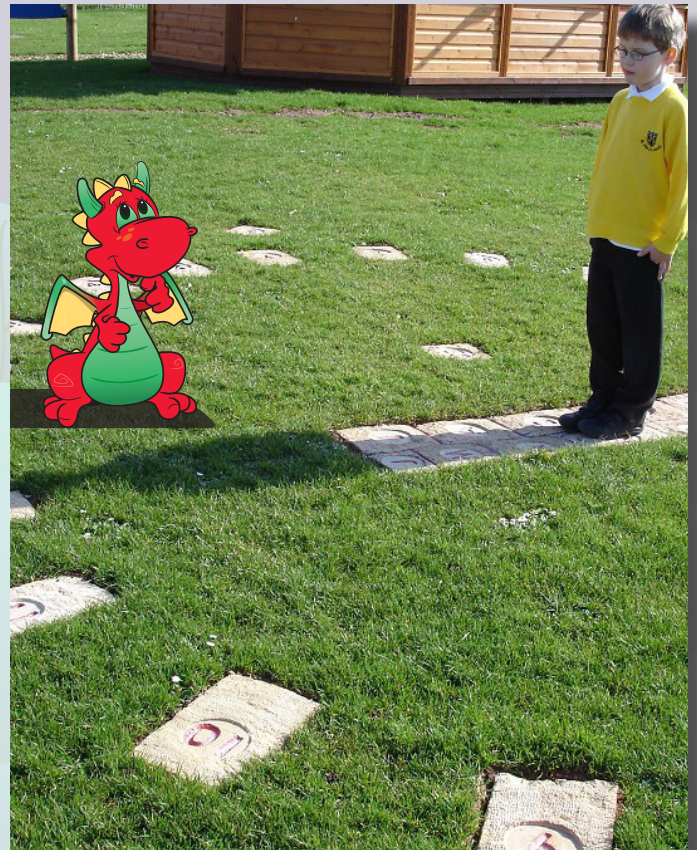
#### What you'll need:

- Chalk
- A wide open outdoor space

#### What you do:

- Choose a day when the sun is shining.
- Encourage pupils to move around the playground. What shadows can they find?
- Can they make their shadows bigger? Or smaller?
- Take the class out into the playground early in the morning. In pairs, encourage them to draw around each other's shadows with chalk. They should label the shadows with their names and mark the spot where they are standing.
- Return to the playground at different intervals throughout the day. Get pupils to stand on the same spot and redraw each other's shadows.
- What do they notice about their shadows throughout the day?

Try making a human sundial. Draw a large circle in the middle of the playground using chalk. Make sure there are no shadows over your circle from nearby trees or buildings. Mark the centre of the circle. Stand in the centre of the circle at each hour of the day. Draw a mark on the circle to show where your shadow is. Mark this with the time of day. Now you have your human sundial. You can use it to tell the time, by standing on the centre spot and seeing where your shadow falls.





### Bedtime Bother

#### What you need:

- Paper
- Pencil

#### What you do:

- Survey each other to find out the class' bedtimes.
- Use a table like the one below to keep a tally of pupils' comments.
- Once everyone has been surveyed, draw a picture to show the results. You could draw a big circle and make it look like a clock. You could add photos or drawings of the class to show their bedtimes by putting their faces next to the time they go to bed. For those who go to bed at half past an hour, you could pin their face between the two numbers (e.g. for half past 7, pin their face between 7 and 8 on the clock).

- Challenge pupils to complete another clock to show what time they get up in the morning. What do you notice about the two clocks? Are there any similarities or differences between them? Who wakes up the earliest? Who goes to bed the latest? Who is awake the longest?



Bedtime						
Number of pupils						

## Curriculum Links

	Personal and social development, wellbeing and cultural diversity	Language, literacy and communication skills	Mathematical development	Welsh language development	Knowledge and understanding of the world	Physical development	Creative development
Night Lights workshop	✓	✓		✓	✓	✓	
Delyth's photos from the workshop	✓	✓			✓	✓	
Making rainbows - post-workshop activity		✓			✓		✓
Night time - post-workshop activity	✓	✓		✓	✓		
Shadow games - post-workshop activity	✓	✓	✓		✓	✓	
Bedtime bother - post-workshop activity	✓	✓	✓		✓		