

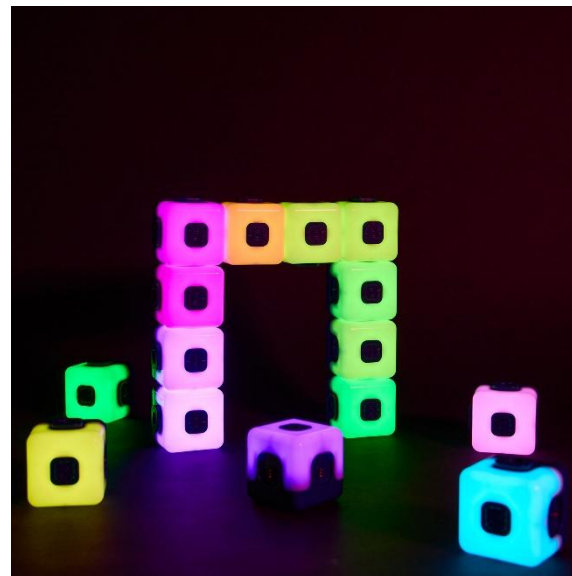
Glow Sequencing Cubes Activity Cards

Glow Sequencing Cubes are a hands-on way for children to explore light, colour and connection through play. By pressing the buttons and constructing with the cubes, children can watch light travel, change and respond. They can be used to bring early ideas to life, such as cause and effect, pattern spotting and problem solving.

There is no right or wrong way to use them. Children can experiment freely. They may enjoy connecting the cubes in different ways, testing what happens when they press the buttons, and notice how their actions create changes and reactions.

These activity cards complement the visual ones that come with the cubes and are here to offer ideas and inspiration to get you started. Each card includes ways to support younger or less confident learners, alongside ideas to extend learning as children become more curious and confident.

The Glow Sequencing Cubes can be used in a sensory space, on a table, in a light or dark environment, or as part of a larger play set up.



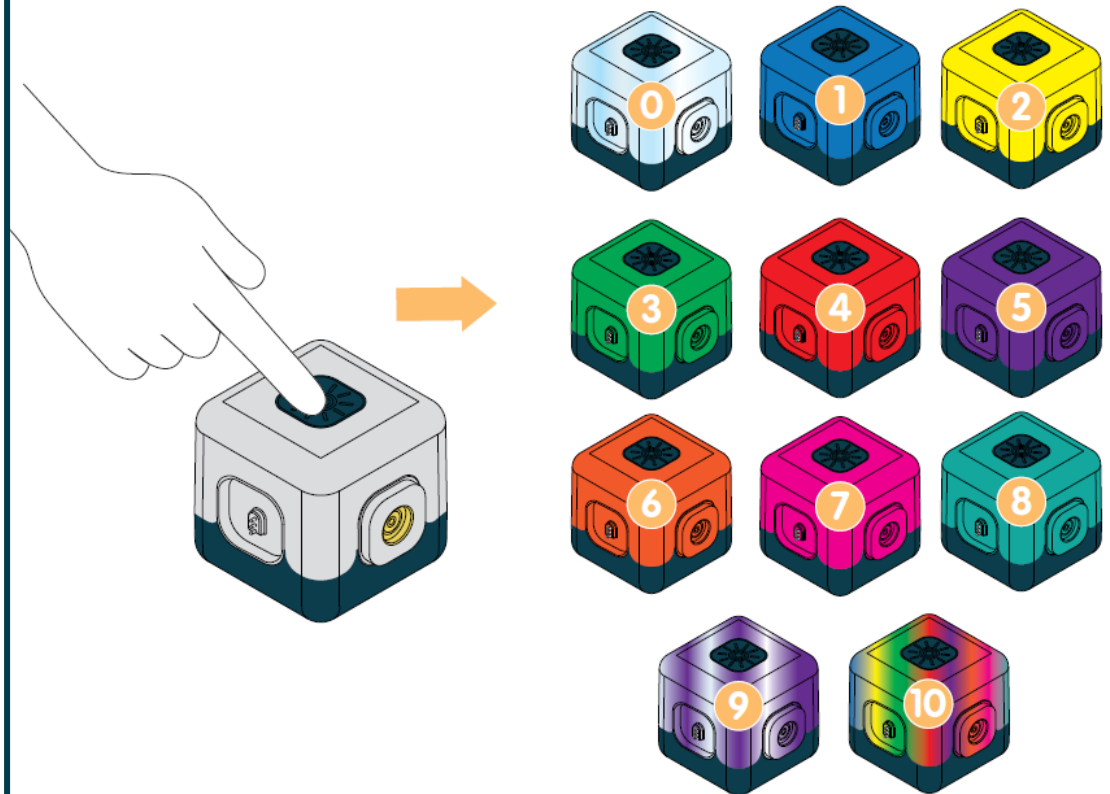
Colour Guide Card

Each Glow Sequencing Cube can display a range of colours, changing with each press of the button (see colours on the diagram to the right).

When used on their own, children can explore these colours freely, watching how each press moves the cube on to the next colour in the sequence.

When cubes are connected, the colour becomes part of something bigger. Pressing one cube sends a signal through the others, changing their colour as the light travels through each connected cube. This helps children see how their actions have an impact, not just on one cube, but on the connected set.

As children play, they will begin to notice patterns and sequences in the colours. The colours can also be used to support language and discussion. Children may start to name the colours, describe the changes and talk about what they can see happening as they investigate and explore.



Activity Card 1

Main Activity

Connect the cubes in a straight line. Invite children to press the first cube and watch the light travel along the pathway. Once the light has reached the end of the line, can they press the button to send the light back? What do the children notice? What changes?

Use simple language and have discussions alongside play:

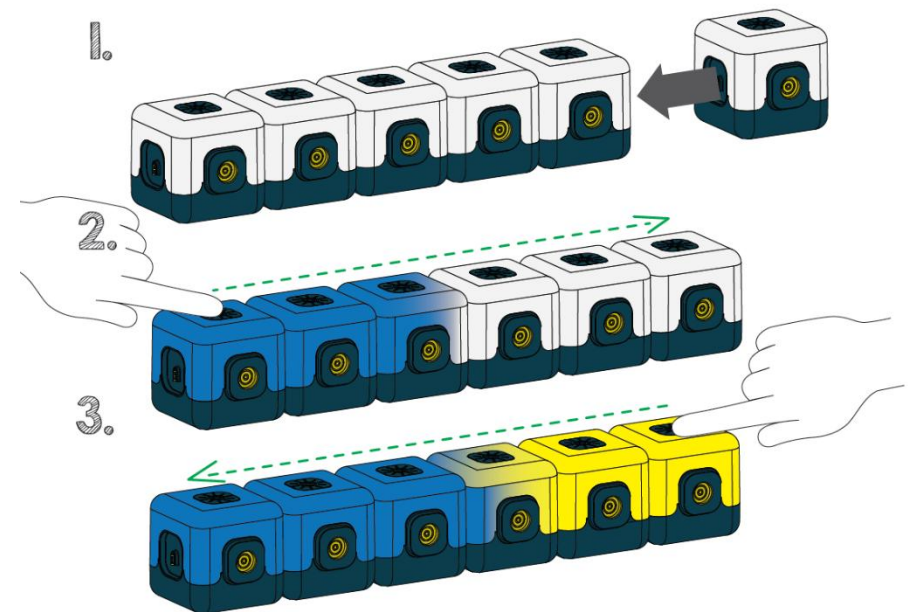
- Where is the light going?
- What happens when we press a button in the middle of the line instead? Does this change how the light travels?

Support

- Start with fewer cubes e.g. 2 – 3 cubes.
- Model pressing and watching together.

Extend

- Build longer pathways.
- Ask children to make predictions before pressing the button.
- Create a turn taking game where children explore sending the light back and forth to each other. Can they wait patiently for the light before sending it back?



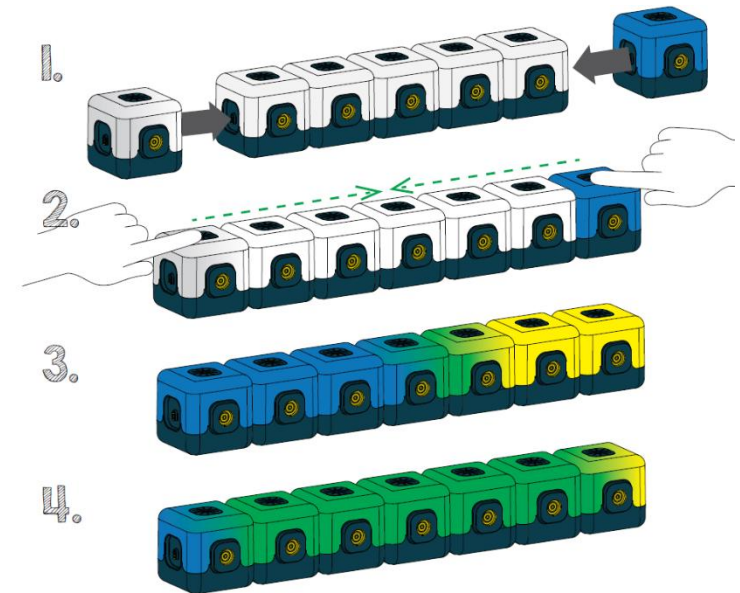
Activity Card 2

Main Activity

Create a connected line of cubes. Add a different coloured cube to each end e.g. blue at one end and yellow at the other. Press the two end cubes at the same time and watch what happens as the colours (signals) meet in the middle and change.

Encourage them to notice:

- What colour did the cubes change to when the signals met?
- Where in the line did the signals meet (which cube)?
- Can you explain what happened?



Support

- Choose distinctive, contrasting colours to support observations.
- Talk though what you can see together.
- Support children to track the light with their finger.

Extend

- Build a T shaped structure so that 3 starting colours can be pressed at the same time. This could be turned into a 'fastest finger challenge' with 3 children. Whose colour gets to the middle first?
- Ask children to predict outcomes before pressing.
- Explore all the colour combinations that can be made when different colours meet.



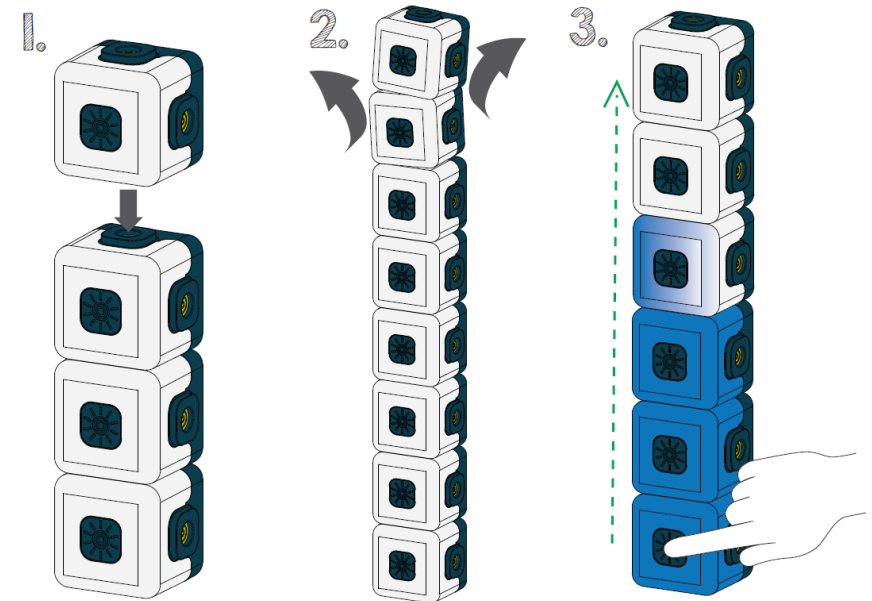
Activity Card 3

Main Activity

Encourage children to stack the cubes vertically to build a tower. How many cubes can be stacked before it starts to wobble? Discuss and explore how the tower could be stabilised to prevent it from falling. Once built, press a cube and watch the light travel up or down the tower.

Talk about what happens:

- Which way did the light travel? Can you make it go up the tower? Can you make it go down the tower?
- Where did the light stop? Why do you think this happened?



Support

- Build together first, looking at how the cubes connect.
- Use fewer cubes for stability.

Extend

- Challenge children to build taller or more complex structures.
- Introduce problem solving – ‘How can we stop it from wobbling?’, ‘Which is the strongest structure you can make?’
- Send signals from different parts of the structure.



Activity Card 4

Main Activity

Start with a small number of cubes, e.g. 2 or 3. Invite children to count the cubes as they connect them, saying the numbers out loud as they touch each one.

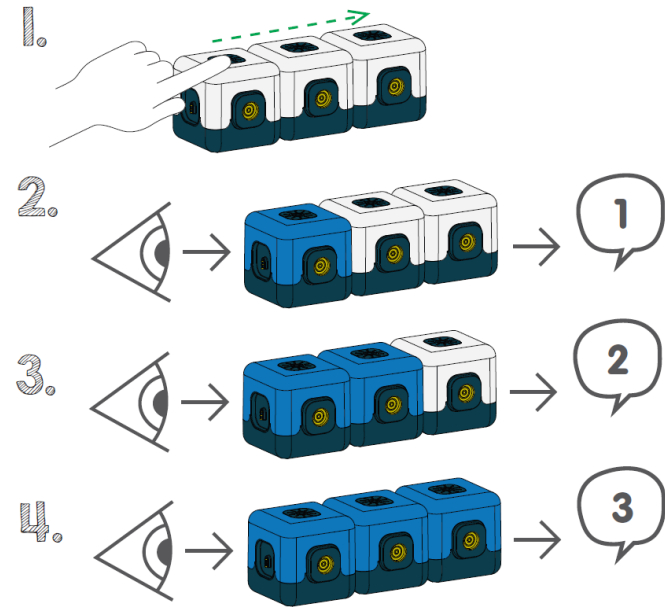
Once counted and connected, press the first cube and watch the light travel before going back and counting again together.

Support

- Begin with one cube and build up to counting bigger numbers.
- Model counting each cube as you connect them.
- Select different colours on individual cubes for the children to count and connect.

Extend

- Ask children to build a set number (e.g. 'Can you make a row or tower of 4 cubes?')
- Introduce 'one more' or 'one less'.
- Using the cubes individually, can the children work out how many times they need to press the button to find certain colours?



Activity Card 5

Main Activity

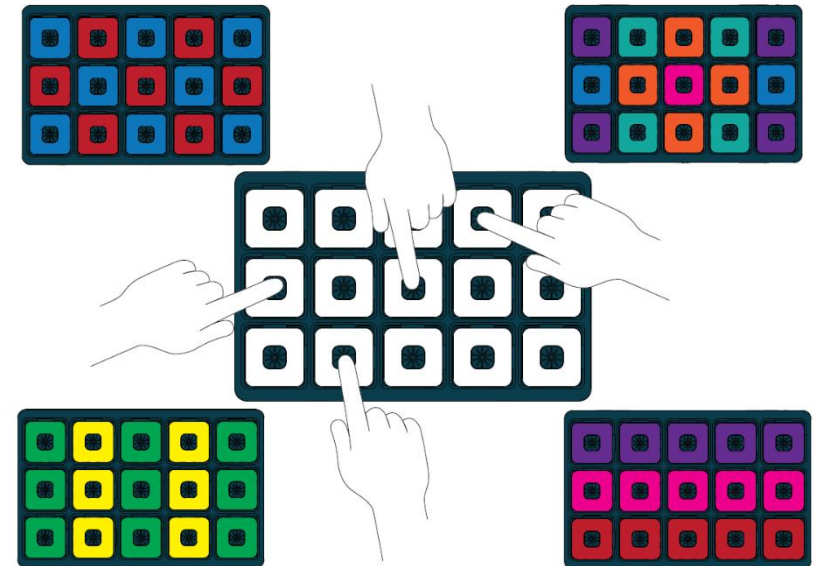
Explore and create patterns by changing the colours on the cubes. Children could create repeating colour patterns, e.g. red-blue-red-blue. An adult could model the pattern for children to copy. Alternatively, children could recreate patterns using the pattern cards or create their own.

Support

- Create the patterns in the docking station.
- Build and discuss the pattern together.
- Start with simple A-B-A-B patterns.

Extend

- Try more complex patterns (e.g. A-A-B-B -C or A-B-C)
- Ask children to continue a pattern.
- Encourage children to check and correct their own pattern.
- Create patterns in different orientations (in the docking station, on the floor, horizontally or vertically).
- Can children find ways to create a pattern more efficiently? For example, they may work out that it is quicker to connect cubes together to change the colour in one press before assembling their pattern.



Activity Card 6

Main Activity

Assign colours to feelings, for example blue = sad, green = happy, purple = angry (please note that this will be different for individual children).

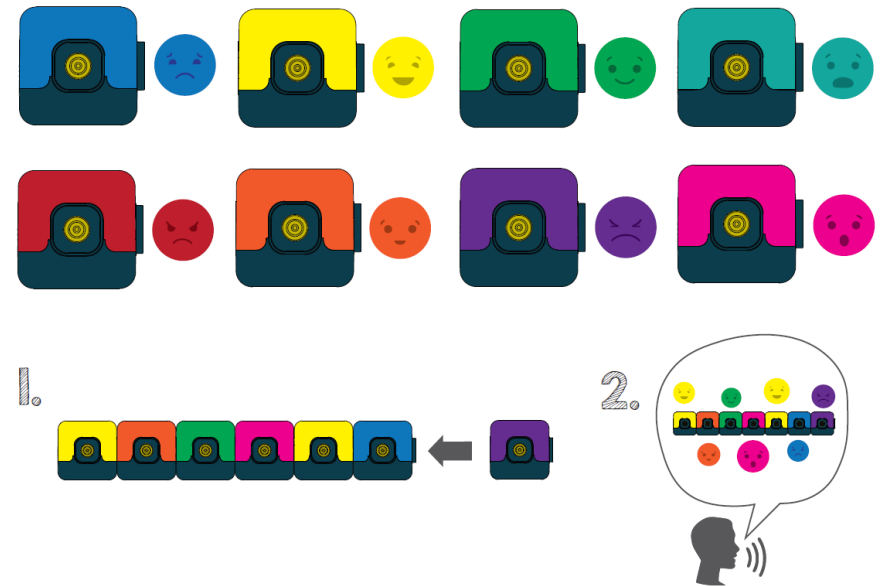
Children could build a chain to represent how they feel or have felt throughout the day. Alternatively, they could use the different coloured cubes to represent the feelings of characters through a story.

Support

- Offer simple choices of emotions (e.g. happy/sad).
- Model language, for example, 'This colour makes me feel calm'.

Extend

- Build sequences to reflect changing moods.
- Link colours and emotions to real life experiences.
- Encourage children to explain their choices.
- Use the light travelling along the cubes to show how emotions can be passed on or to demonstrate how our actions can impact or influence others.



Activity Card 7

Main Activity

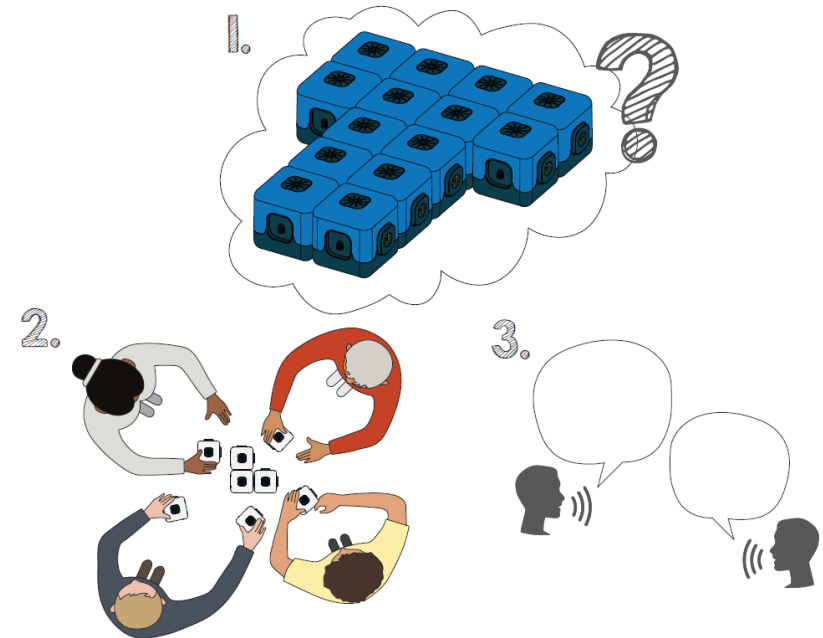
Work together in small groups to build a shared structure. This could be a horizontal or vertical creation. Present children with different challenges e.g. to make the structure all one colour or different sections in different colours. Children will need to work collaboratively to test, rebuild and discuss.

Support

- Give clear simple goals with visual diagrams/pictures for support if needed.
- Start with simple shapes or structures.
- Model turn-taking and sharing.

Extend

- Add challenges, for example, 'Can they create a more complex shape or a stronger structure?'
- Encourage discussion and planning.
- Introduce roles within the group.
- Explore and model problem solving skills such as breaking down problems into smaller steps. For example, children may need to build separate parts of the structure and change the colours before combining the parts to make the whole.



Activity Card 8

Main Activity

Connect a line of cubes and create a conversation game. One child presses the cube to send the light along the row. When the light reaches the other person, it is their turn to choose a different colour and to speak about a topic of their choice. They might send a colour for them to name or ask a question for them to answer. The rules are that you must wait until the light reaches you to answer.

This provides a clear, visual cue for turn-taking, and serve and return interactions.

Support

- Start with two children and a shorter line of cubes.
- Model: 'It's my turn...now I press and send it to you'.
- Keep questions and responses simple e.g. one word answers.
- Use familiar prompts such as favourite colour, animal or food.

Extend

- Create a memory game where you repeat what the last person said before adding your idea.
- Build a shared story where each child says another sentence as the light reaches them.

