



Applicable Grade Level/s:	K, 1
Subject/s:	Science
Curricula:	Australian Curriculum, Common Core/NGSS
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Colourful Bubbles

In this lesson students design and 3D print a wand for blowing soap bubbles.

They use their wands to make and record observations about soap bubbles.

They learn that bubbles have colours in them because light is reflected off the soapy walls at different angles.

Single Lessons

Colourful Bubbles

Step 1 What is a bubble?	Ask students what they already know about bubbles. What do you need to make a bubble? soap mixture bubble wand	
Step 2 Designing a	Explain that students are going to make their own bubble wand. What does a bubble wand need to have? A hole to blow a	Devices with Makers Empire 3D design

bubble wand	bubble through. A handle to hold. Students open Makers Empire's Shaper Module Students now to choose a shape for their bubble wand. Encourage students to choose a range of different shapes. Which shape might make the most interesting bubbles or the biggest ones? Once they have selected their shape they can adjust it's size and thickness. They will now need to design a handle for their wand and make sure that the two parts are well connected. Once students' designs have been finished, arrange to have the bubble wands 3D printed	software installed 3D printer
Step 3 Bubble Observations	Students now use their bubble wands to blow bubbles with soap mixture. Ask the students what they notice about the bubbles. What do they look like, smell like, sound like, feel like? What shapes are there? Do they see colours? What do the bubbles do? How do they move?	3D printed bubble wands soap mixture plastic dishes paper and markers for drawing bubbles
Step 4 What do you think?	Ask students why they think bubbles have colours in them. Records student's suggestions on the whiteboard.	whiteboard and markers
Step 5 Finding out.	With the whole class, model using an internet search to find out why bubbles have colours in them and write an explanation on the whiteboard. e.g. The rainbow colours you see in bubbles are caused by light that is reflected off of the walls of the bubble.	Computer with internet access

Curriculum

Common Core/NGSS:

- 1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.
- K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.