

Think



- What can you see?
- Who do the shadows belong to?
- What are they doing?
- Where are they?
- What are they saying to each other?



Solve



Luke can blow 23 bubbles in one minute. How many bubbles can he blow in half an hour? How many bubbles can he blow in an hour? How many seconds does it take him to blow one bubble? Calculate the answer to one decimal place.

Respond



The next bubble the children blow is so big they get trapped inside it! What happens to them? Where do they go?

Reimagine



Can you draw the scene from the bubble's perspective?

Discuss



Some adults think that children today do not spend enough time doing things like blowing bubbles or making shadows shapes in the park. They think too much time is spent on screens and not enough time outdoors. What do you think? Is it a waste of time blowing bubbles or making shadows? Do children need a balance of both outdoor and indoor activities? Why? How do you spend your free time?

Discover



Fact: Only translucent or opaque objects will block out the sun's rays and create a shadow.

Question: Carry out an investigation to see if this is true. Try and make shadows with different objects including transparent ones and record your results.

Shadows **Answers**

How many bubbles can he blow in half an hour?	How many seconds does it take him to blow one bubble?
Children will need to multiply the total amount of bubbles per minute by 30. $23 \times 30 = 690$ bubbles in half an hour.	To calculate the number of seconds it takes to blow one bubble, children will need to divide the number of seconds in a minute by the number of bubble blown: $60 \div 23 = 2.6$ seconds per bubble (to one decimal place)
How many bubbles can he blow in an hour? To calculate the number of bubbles in an hour, children will need to double the number of bubbles blown in half an hour: $690 \times 2 = 1380$ bubbles Children could also multiply the number of bubbles per minute by 60: $23 \times 60 = 1380$ bubbles	