Y1&2 – Lesson Plan 2

Will a tower out of cups ever be strong enough?

Aim:	Key Words:	Preparation:
To be able to build a strong structure using limited materials. To be able to work well as part of a team.	• tallest • tower • strength • structure • height	• paper cups

Prior Learning: children will have learnt that different objects can stack to form a tower.

WC / PT	Warm-up: Can you name some tall objects? What objects around the school site are tall? What challenges might there have been when making these objects? What do you notice about these tall objects?	0-5 mins
WC / PT	Main Teach: Look at pictures / videos of some of the tallest objects / structures in the world. What do the children think when they first see these objects / structures? What questions do they have? Create a list of questions that children would like to ask about these objects / structures. Discuss how the shape of a structure can have an influence on how strong the structure becomes.	10-15 mins
I / S	Activity: 1. Get into groups within your class. 2. Get twenty paper cups per group. 3. Discuss as a group how you will make your tower the tallest. 4. Build the tallest tower you can, in five minutes. 5. Measure your tower. How many cups tall is it? 6. Compare your tower with others in the class. 7. Whose tower was the most successful and why?	30-40 mins
I	Extension Challenge: Test the strength of each tower by putting objects on the top. How many objects can each tower hold before collapsing? Complete the challenge for a second time using 3 x 30cm lengths of tape.	0-15 mins
WC	Plenary: Whose tower was the strongest? How did the shape of the tower influence its strength? Did different groups build their towers on different surfaces and how did these surfaces affect the strength of the towers?	5 mins

WC – Whole Class PT – Partner Talk I – Independent S - Support

Challenge A	Design and make a bridge spanning a gap of 30cm which can hold as much weight as possible.
Challenge B	Design and make a wheeled vehicle which will travel independently from the top to the bottom of a slope angled at 30 degrees.