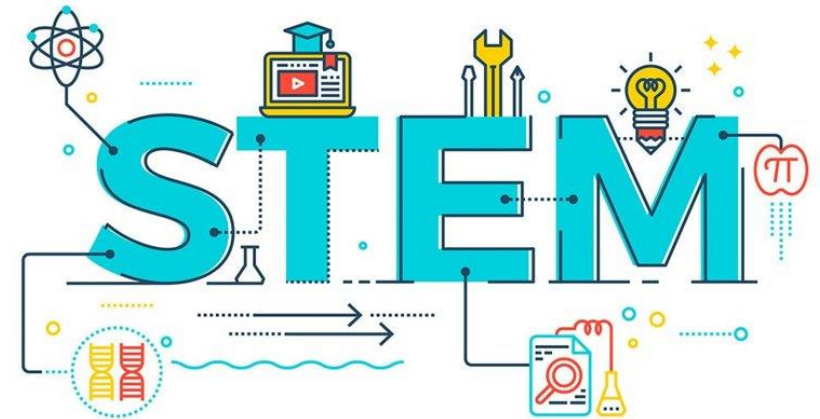
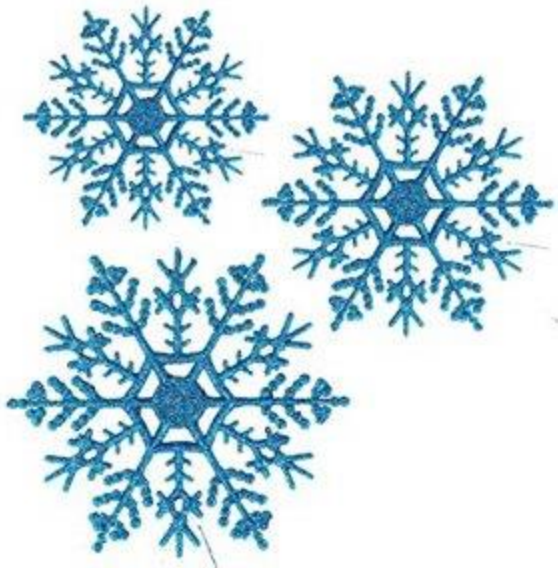


Teacher notes and tips

- In this STEM Challenge, learners design, build, test and improve a snowball maze built on a paper plate. The idea is to be able to tilt the plate in different ways to get the snowball to roll from the start to the finish point, without touching the snowball. This STEM Challenge could be extended by adding or swapping materials for building the maze walls.
- Time – allow approx 1h30 including tidy up time!
- Suggest teams of no more than 3 (2s are great for this STEM Challenge)
- After you have explained the rules of the challenge, give learners time to share ideas and make a plan in teams, then 20-30 mins to build their designs. Look at each others' designs and talk about what went well with their design and how it could be improved.
- Avoid making STEM Challenges competitive
- Don't provide instructions, a video or photo of what a finished design might look like – richer learning happens when learners use their creativity to design something to solve the problem rather than copying a design they have seen
- Try to get the learners to solve problems themselves – use questioning to support them – avoid giving answers and suggestions!

Winter STEM Challenge

Snowball maze



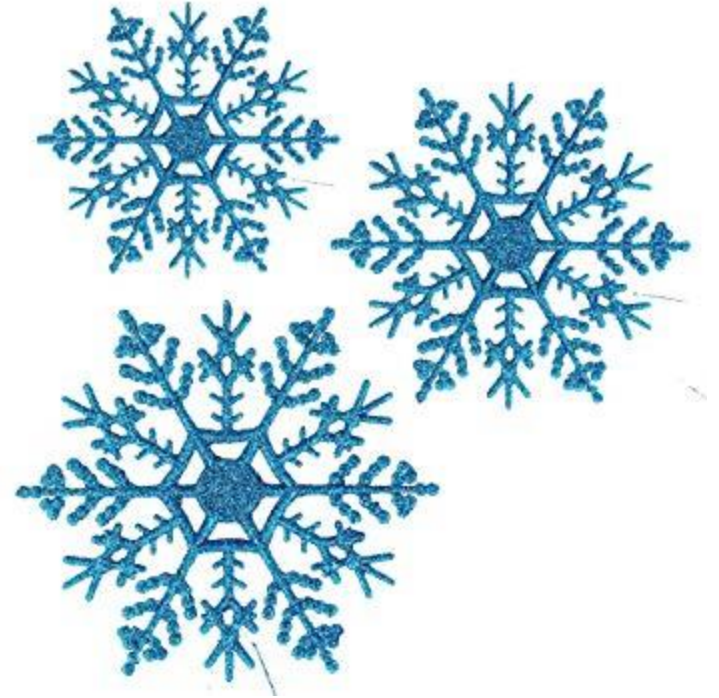
Learning Intentions

- To **design and create** a winter game
- To build up our **skills** such as **creativity, problem-solving, teamwork** and **communication**

Snowball maze challenge

Make a small snowball each, using cotton wool

Think about how wide it is, because it needs to fit through the maze you build!



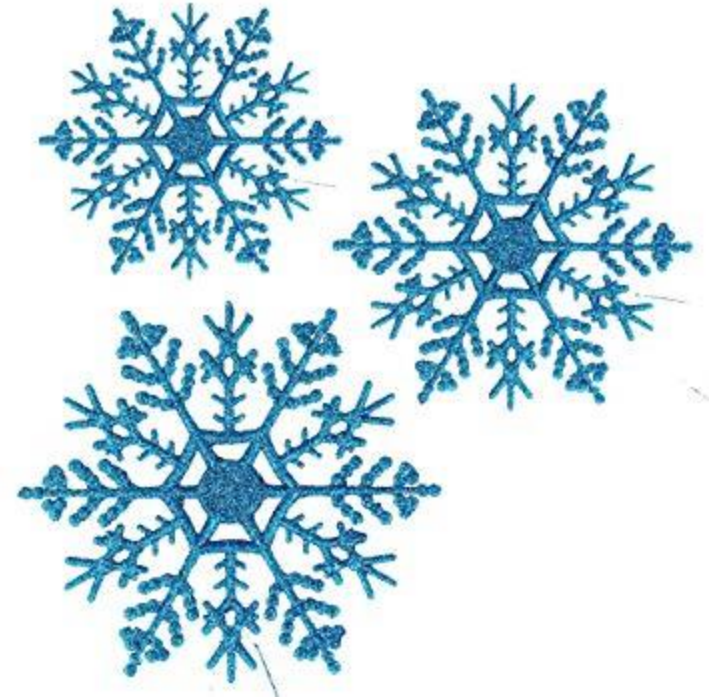
Snowball maze challenge

Design and create a maze game for your snowball

Label where the snowball should start and finish

What will you need to think about?

**Materials: cotton wool for snowballs,
1 paper plate, 4 paper straws, sellotape**





What can you learn from others?

- **Learning loop** – look at other people’s mazes.
- Test out their maze
- What works well?
- How could it be improved?
- Give positive, kind feedback

