

Resource Checklist

- 1 Critical Thinking PowerPoint
- 1 per group Flood wall construction Gantt chart and marker
- 1 per group Dice
- 1 per group Timer
- 1 per group Scenario sheets

Learning Intentions

- We are learning the different materials required to build a flood wall.
- We are learning the steps to build a flood wall.
- We are learning to act as a Project Manager who oversees building a flood wall.

Success Criteria

- ✔ I can recognize some of the materials required to build a floodwall.
- ✔ I can understand how these materials are used in the construction of a flood wall.
- ✔ I can recognize the steps required to build a flood wall and in what order.
- ✔ I can think critically to make project management decisions. I can display data in a useful way.

30 mins-
1hr

Critical Thinking Task

AC: Additional Challenge
AS: Additional Support

- Go over the Learning Intentions and Success Criteria.
- Give Grangemouth Flood Protection Scheme Overview
- Introduce why critical thinking is an important skill in a project like this.
- Pupils to be split into teams of 4.
- Each group to be issued with the project Gantt chart, marker and dice.
- Explain for the pupils what a Gantt chart is. Explain that the project tasks to be complete is in the Y axis, and the X axis is the number of weeks through the year. The blocks of colour indicate when in the year and for how long each task needs to be done. Tasks will depend on each other being completed, give an example from the game board.
- Get the pupils to have a look at the tasks which need to be completed to design and build a flood wall. Get them to look at how long each part takes and when might be dependent on the next.
- Pupils will play the game as a team and try to get to the end of the 52 weeks in the quickest time. They will roll the dice and move along the colourful squares. When the pupils land on a square then they must think critically about what do to. If they are asked to provide mitigations/solutions for situations, they must raise their hand and wait until the facilitator comes to hear their suggestions. If the facilitator is happy with their suggestion, then they can complete the action. If not, they must complete the alternative action. Pupils only need to read the text of a square they have landed on as a result of a dice throw. The team must work together to make critical decisions as they will win or lose as a team.
- Towards the end of the session, stop the pupils if they have not already completed the game. Record the completion times or week of progress of each team.
- Ask them to reflect on their choices with regards to project completion vs difficult decisions.
- Extension task to consider scenarios in groups and make justified action option choices.
- Ask them to reflect on their skills in making critical decisions.

AS: Pupils will complete task as a group so pupils can support each other with this task.