

Resource Checklist

- 1 Creativity PowerPoint
- 1 per group Experiment materials set
- Access to water
- 1 set per group Experiment design worksheets

Learning Intentions

We are learning about the purpose of a flood wall.
We are learning how creativity is an important skill in Science.

Success Criteria

- ✔ I can research the purposes of a flood wall.
- ✔ I can identify possible variables in an experiment.
- ✔ I can identify different ways to measure changes in an experiment.
- ✔ I can write instructions for and carry out an experiment.
- ✔ I can evaluate the results and effectiveness of my experiment.



Creativity Task

AC: Additional Challenge
AS: Additional Support

- Go over the Learning Intentions and Success Criteria.
- Give Grangemouth Flood Protection Scheme Overview
- Introduce why creativity is an important skill in a project like this. If you have completed other tasks in this series, then ask pupils for examples of using creativity skills from the other tasks they have undertaken.
- Pupils to be split into teams of 2-3. Each team is to be given a set of experiment materials and an experiment design worksheet.
- Pupils are to create a Science experiment to test the effectiveness of a flood wall. Point out to pupils that there is more than one experiment which could do this, and scientists need to be creative when designing experiments. Pupils will follow a normal design process: Brief, research, ideas, make, test and evaluate.
- Work through the design stages using the design worksheets to create an experiment. The brief is set. Research is the definition of the purpose of a flood wall. Ideas should be around potential variable for the experiment and ways to measure the outcome of the experiment. One experiment should be chosen with one variable and one measurement to be recorded. Pupils should make a prediction as to the experiment result. Carry out the experiment and record the results. Pupils should then evaluate the experiment for its success.
- Pupils may wish to share their results with the class.
- Ask pupils to reflect on their creativity skills on this task and others. Did they realise that creativity was part of Science too?
- Complete the lesson with the PowerPoint examples of how those working on the Flood Protection Scheme use their creativity skills.

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

AC: Pupils could be asked to write up a report of their experiment.

Pupils may wish to try a different variation of the experiment, created by another pupil or group, and compare the effectiveness of each.