

Name: _____ Class: _____

EXPERIMENT DESIGN BOOKLET

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

Brief: 'Create a Science experiment to test the effectiveness of a flood wall'.

Research

A **flood wall** is a wall built to prevent flooding by temporarily containing high water levels.

Materials available:

Material	Examples
Flood wall building material	Lego, wooden blocks, tin foil
Flood wall sealant	Plasticine, playdough, slime
Testing container	Bucket, square tub, cuboid/cylindrical box
Measuring equipment	Measuring jug, tape measure, laminated sheet of paper, marker pen



Falkirk Council

Protecting the heart of our communities

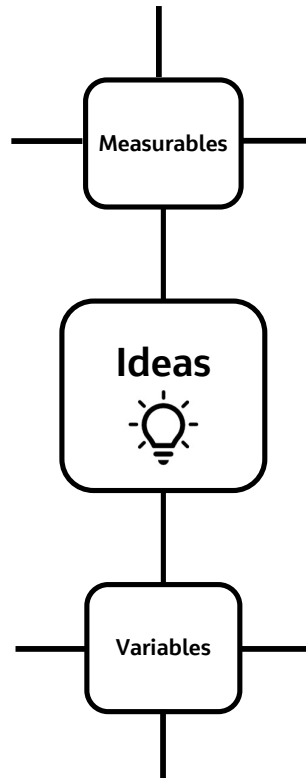


GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities

Ideas

Brainstorm ideas for the experiment methodology using the spider diagram:

- What are the potential variables for the experiment?
- In what ways could you measure the outcome of the experiment?



The variable I will use will be: _____

I will measure changes using: _____



Falkirk Council

Protecting the heart of our communities



GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities

Build

Materials list:

Create a list of materials you will use for your experiment:

- Water
- _____
- _____
- _____
- _____
- _____
- _____

Methodology (what will you do?)

Outline your chosen method for your experiment in the space below:

<ol style="list-style-type: none">1. We will build our flood wall/flood walls using _____.2. We will place the flood wall/flood walls in the _____ container/containers.3. The flood wall/flood walls will be sealed to the container using _____ sealant/sealants.4. We will pour water into the container on one side of the flood wall.5. We will measure the success of the flood wall by using _____ to measure _____ in the units _____.6. We will know which wall/container/sealant is the best because _____.
--



Falkirk Council

Protecting the heart of our communities



GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities

Test

Hypothesis

Outline your predictions for what the results of your experiment will be in the space below:

We think that the best wall/sealant/container will be _____

Why do you think this will happen?

We think this because _____

Results

Variable 1	Variable 2	Variable 3

Conclusion

Write a summary of the outcome of your experiment in the space below:

We carried out the experiment using the methodology above and found that _____



Falkirk Council

Protecting the heart of our communities



GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities



Falkirk Council

Protecting the heart of our communities



GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities

Evaluate

Reflect on your experiment by answering the questions below:

1. Was the result what you expected? *(If not, how was it different, suggest why?)*

Our prediction was correct/incorrect because _____

2. What were the strengths of your experiment?

The experiment went well because _____

We could have improved _____ in the experiment.

3. Was the experiment a fair test?

We had one variable and one measurable so the experiment was a fair test.

4. What could you do differently next time?

If we were to do this experiment again, we would _____



Falkirk Council

Protecting the heart of our communities



GRANGEMOUTH
Flood Protection Scheme
Protecting the heart of our communities