

Resistant Materials Lesson Plan for Design Technology (Secondary)

This lesson is based on the 2010 HMD theme **The Legacy of Hope** and a selection of supporting case studies.

Aim

To design and plan a new and sustainable memorial, suitable for an individual or group of people found in the HMD 2010 case studies by investigating materials, structure and visual statement.

Starter

Introduce the concept of physical memorial. **Explain** that sometimes we want to help people, today or in the future, remember events or people. One way of doing this is to set up a physical memorial for people to visit. **Give** some examples - most towns and villages have a war memorial to remember those who died in battle. In Hyde Park, London there is a memorial for Princess Diana, who died in 1997. In Edinburgh there is a memorial to a loyal little dog called Grey-friars Bobby, in Belfast the McSweeney Centre is named after a child who died in the potato famine and in Aberfan there is a memorial dedicated to children who died in a landslide disaster in 1966.

Ask Where is the nearest memorial to your school or college? To whom or what is it dedicated? What materials were used to build it? Is there a special day when people visit it? Why might people visit it and what do they do when they get there?

Explain that creating a memorial is complicated. Designers and constructors have to spend months in design, planning and consultation and that you are going to investigate some of the things that need to be considered when memorials are planned. Your investigations will be linked to true stories about people who suffered during the Holocaust or subsequent genocides. January 27th is Holocaust Memorial Day, when people in the UK are encouraged to remember the victims of Nazi persecution and those who have suffered more recently in Cambodia, Rwanda, Bosnia and present day Darfur.

Stage one

Selecting your subject and gaining knowledge of their story. Present the class with two of the case studies. Using the case studies, **outline** the story of the individual or group. **Identify** with the class the key points of the story and the main events, messages or dates which have potential for commemoration. **List** students' ideas on the white board.

Or **ask** students to work in 5 groups and using the same questions, **give** each group an individual case study to work through together.

Stage two

Finding a memorial site.

Explain that memorials have to fit into the landscape. Finding a suitable site is very important. Using your chosen case study discuss where the best place for a memorial would be. Should it be on the site of an event or in a major public space, e.g. in a park capital city? How accessible can it be? **Show** students some examples of memorials and discuss any obvious differences in design, structure and the way the public is encouraged to use them. Are memorials just to be looked at or should they be interactive? In Berlin people are encouraged to walk through the Holocaust memorial. The McSweeney building in Belfast is used every day, people work there. **Show** students some of the memorials in the Marion Davies Absence and Loss exhibition. Images can be found on the last page of this lesson plan. Sometimes a whole museum becomes a vast memorial e.g. Yad Vashem or the United States Holocaust Memorial Museum or Tuol Sleng in Cambodia.

Working in groups students should decide where their memorial is going to be constructed. They need to explain how it will fit into the landscape and what they hope people will do when they visit it. How will it help them remember the person, group or event?

Stage three

Thinking about materials

Once students have decided the location of their memorial site **explain** that they need to consider the choice of materials to be used for construction. They will need to think about several things.

Give groups a set of cards which contain types of materials which have been used for constructing monuments.

Marble	Glass
Sandstone	Granite
Slate	Stainless Steel
Iron	Wood
Water	Concrete
Woven willow strands	

Ask students to consider the following questions, related to their chosen memorial site and keep or discard cards according to suitability of materials. Students will need to investigate the properties of the materials in order to make their choice. You could **give** each group a handout which contains the following prompts.

Climate and weathering

Is your monument in an exposed situation where it must survive strong winds, heavy rainfall, the damp salty air by the sea or a harsh dry climate?

Remember that if you want your monument and any inscriptions to last then some materials would survive longer than others in different conditions. You don't want your memorial to rust or wear away after only a few years.

Working with the Materials

Are some materials easier to work with than others? Think about the shape of your memorial. How complex or simple will it be? Will it contain complicated shapes? Is it easier to shape some materials than others? If you want an inscription of words or images on the memorial what would be the best base for them? Remember you want the message to stand out and last a long time.

Health and safety

What do you want the public to do when they visit your memorial? Will some materials be safer than others? If you want people to touch, walk on or through your memorial then it would be dangerous to have sharp edges, wet slippery stone or deep pools of water.

Existing landscape

What sort of statement will your memorial make? Do you want your memorial to fit into the landscape or stand out from it? How do you want people to react to it? A stainless steel memorial might not always fit into an old town centre with historical buildings but a traditional stone plinth might look odd in a modern new city.

Sustainability and Carbon footprints

What impact will both the construction and existence of your memorial have on the community? How green is your memorial? How much energy will be used to create it? Do some materials have a smaller carbon footprint than others?

Cost

How much money should you spend on your memorial? Some materials will be more expensive than others. Who is paying for it?

You may like to add other areas for consideration, depending on the time allowed.

After considering the above, students should only have a few cards left. Use these cards to select one to three materials for their memorial before proceeding.

The final design

Give students the following instructions, they may now work in pairs or groups or as individuals.

Prepare a design plan, drawn to scale where possible, for your memorial. Show how the memorial will look from each side, and from a distance within the landscape.

Show how your memorial is linked to the story you selected and note any inscriptions or messages it will carry.

Finally write a brief report which could be presented to a local council planning committee, explaining why your monument is important and why it is a **Legacy of Hope** for the future.

Images from the 'Absence and Loss' exhibition by Marion Davies









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More images can be found at www.mariondavies.co.uk