



Developed by
St. Ives Secondary School (Humanities Faculty)
and Pendeen Community Heritage, Geevor Tin Mine
2010

This booklet is intended to give ideas, suggestions and possible resources that teachers at Key Stage Three can use in conjunction with a visit to Geevor Tin Mine in Pendeen, Cornwall.

It includes work that can be done at the site itself and follow up work that can be done at school or as part of an Independent Study programme.

All activities in this booklet share a common vocabulary and we have highlighted cross-curricular links as well as highlighting key concepts and Key processes from the National Curriculum. Activities are broken up into steps and resources required are clearly listed.

We hope that you find the booklet useful. If you have any more questions please feel free to contact either Rebecca Gardner (Learning Team Manager at Geevor) or Ruth Fletcher (Leader of Humanities at St Ives Secondary School)

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Visit our website <http://www.geevor.com> for what's on and for more information and resources.

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- Identifying minerals and stones
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- A Miner's Tale—Interview work

PART II

Resources (see separate downloads on website)

1. The Dry—sights and sounds
2. The Dry—What were they saying?
3. Working with stones and minerals
4. Detective work
5. Geevor Tin Mine—Uncover the story
6. Human impact on the environment
7. Landscape
8. Smelting marks

PART III

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THE MINER'S DRY

VISIT ACTIVITY WITH FOLLOW UP

Cross-curricular links: English; History; Drama; Music, PSHE

NC concepts and processes: Communication; creativity; cultural understanding, change and continuity; diversity of experience

PLTS: Creative thinkers

Objectives: to encourage students to empathise with people from the past and use their imagination to put themselves in the shoes of others

On site

- Workbook (Resource Sheets 1 & 2)
- The Dry (Geevor Building)
- Handheld camcorders or camera

In school

- Workbook
 - Handheld camcorder or digital cameras
 - Paper/glue/scissors
 - Recording Equipment
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Starter: Get pupils to imagine what this room was originally used for.

Ask pupils to enter the dry room in silence making a note of what they see around them. Ask pupils to think about the noises this room would contain. Fill in the thought bubbles of the miners on the day they discovered the mine was closing down.

Read the notices and information in the room.

Plenary: Tell someone in your group 2 facts you discovered so they can add it to their list

In school outcome:

Compose a poem or a piece of music telling the story of the day the mine closed and the impact it would have had on the miners. Think of the key images you saw and noises you imagined you heard.

Success criteria:

- Include date of closure
- Imagined conversations and noises
- Described sights
- Explored feelings
- Thought about the impact of the closure of the mines on the community
- Created an atmosphere or mood

IDENTIFYING MINERALS AND STONES

VISIT ACTIVITY

Cross-curricular links: Geography; Geology

NC concepts and processes: Physical and human processes; out-of-class learning; Place

PLTS: Effective participators; Independent enquirers

Objectives: to learn about different stones and minerals

On site:

- ◆ Sheets to record different stones (See Resource 3)
- ◆ Panning equipment (available on site)
- ◆ Stones and bags provided by Geevor

At School:

- ◆ ICT
- ◆ Geology loan box (ask Geevor's Learning Team for details)

Starter—20 questions. Student thinks of a stone, mineral or metal without telling its name and class has to ask questions. The students can only say yes or no.

Onsite—Panning for gold. Students shown how to do this. They then have 10 minutes to look for different stones. When the time is up they sit down and on their sheet they have to identify and categorise the stones using their own categories.

Geevor's Learning Team can provide mineral specimens for handling and a limited number of microscopes for small group use whilst onsite.

Use Geevor's mineral gallery as inspiration for the different minerals that can be found in Cornwall.

Explore the wider Geevor site down to the coastal path to see the copper staining on the cliffs.

In school—Students have to research these stones using the Geevor web site and produce a presentation on minerals (topics could include properties and uses of different minerals, how the minerals were formed in Cornwall, demonstrating techniques of identifying minerals, effect of mining on landscape, a creative presentation inspired by minerals).

Geevor can provide a Geology loans box either before or after the site visit, it contains mineral specimens, photos, maps and activity ideas.

DETECTIVE WORK

VISIT ACTIVITY

Cross-curricular links: History; Geography; Geology, Technology

NC concepts and processes: Chronology; cultural understanding, change and continuity; cause and consequence; diversity of experience; enquiry; handling evidence; place; physical and human processes; environmental interaction; out-of-class learning; critical evaluation; know and understand technologies and materials

PLTS: Effective participators; self-managers; team workers; Independent enquirers

Objectives: to encourage students to use artefacts and evidence in order to draw conclusions about the past; to familiarise students with collections in museums; to make students consider the links between different curriculum areas.

On site

- Floor map of Hard Rock Museum
- Workbook (Resources 4 & 5) - Detective work
- Pencil

In school

- Workbook

Preparation: A pre-visit by teachers to get to know the collections and layout of space is essential. Maybe take photos of display cases and layout (if permitted) so a floor plan can be drawn up to direct students to specific cases, or use photos on Geevor's website (www.geevor.com).

Starter: May be necessary to go through key ideas or answers that they need to look for before letting them explore the museum. Encourage the sharing of information and team work if there is a limited amount of time. Encourage them to think of ideas for their final work whilst they go around the site and to take appropriate notes/photos/drawings that they think they will need for it.

Follow plan of museum to find the relevant information from the workbook. Whilst looking around what is your general impression of the area over the last 200 years? What do you think of the exhibits? How could they be improved? What areas of the curriculum does this museum cover?

Points to consider!

An adult will need to be on hand to give prompts and direct pupils. SEN children will need LSA's to help with reading notices.

Plenary: Feedback in group discussion ideas about the questions given above.

In school: Information gathered can be used to help with a final piece of work whether it be a documentary; a critique of the museum; piece of artwork; story; musical composition etc. or alternatively, to create their own exhibition on a particular aspect of the mine that took their interest, which they then have to present to others.

ART AND LITERATURE ON THE LANDSCAPE

VISIT AND SCHOOL ACTIVITY

Cross-curricular links: Art; History; Geography; Technology

NC concepts and processes: Creativity; cultural understanding, explore and create change and continuity; cause and consequence; enquiry; place; space; scale; environmental interaction; out-of-class learning.

PLTS: Creative thinkers

Objectives: to encourage creativity and visual awareness of the environment in which they live in; to develop observation skills

On site

- Workbook (Resource 6)
- Drawing equipment

In School

- Pictures (either students own photos or look at Geevor's online Resource Bank www.geevor.com on whiteboard)
- Variety of craft materials (e.g. newspaper, tissue paper, inks, PVA glue)
- Scissors
- ICT access (if appropriate)

Starter—Look around you and think of a series of descriptive words to describe the environment. If time, students will be introduced to the work of a number of artists who have drawn landscapes in different styles and encouraged to talk about their techniques.

Onsite— As students explore the site they will be encouraged to keep sketches of the shapes and forms they see around them. In their workbook they have been given a space to sketch natural shapes and man-made shapes as well as accompanying comments and descriptive words. They will then be given time to find a quiet spot and draw a picture of the landscape, perhaps in two or three different locations, different perspectives and different styles.

If time, include the wider Geevor site near the coastal footpath, if appropriate, where green copper staining can still be seen on the cliffs, and the remains of mining can be easily seen.

In school— Students can use any artistic technique they desire and the more imaginative they are the better. They will then use their notes, photos and sketches from the field trip to produce a piece of work that clearly shows the interaction of the natural and man-made environment at Geevor. This may be a piece of multi-media artwork; story; musical composition; 3D model, etc. They can add copper work (see next activity), or even use ICT media.

THE TREASURE BOX

VISIT OR SCHOOL ACTIVITY

Cross-curricular links: History; Technology; Media; Art; English; Drama

NC concepts and processes: Significance, Enquiry, Communication, Cultural understanding, Speaking and Listening, Know and Understand materials and technology, Creativity

PLTS: Team workers, Creative Thinkers

Objectives: to develop imagination and curiosity; to develop language skills and communication

On site or at school

- Artefact box (boxes can be loaned to schools by Geevor)
- Sketch book or whiteboards
- Pictures (in loans box, or 'virtual loans box' on website, www.geevor.com)

Starter—This should be done with the more unusual objects. Pupils sit in pairs back to back. One takes an object from the box and has to describe what it looks like. Meanwhile the other person has to do a blind sketch based on the description. There could be a set of words that they can not use (like the game Taboo) or the artist can only ask twenty questions of the object-bearer. When they finish they can compare the object with the drawing.

What could it be? Ask 3 pupils to come up with an explanation of what they think one of the objects is. It must be a convincing explanation. They can be as creative as they want. They then feedback their explanations to the rest of the group in a 'Call My Bluff' style. The class have to decide which explanation they think is most convincing. Keep a record of their responses.

Plenary—As a group discuss the explanations and slowly reveal the main purpose of the object.

Alternatively, a member of Geevor's Learning Team can deliver an Outreach session bringing artefacts and costumes to school and lead this hands-on session. See website for details.

Follow up—Looking through the artefact, students piece together the life of a miner or Bal Maiden. They can use the information to produce a play or a story. If possible they can dress up to act out their play. You could use a story board to plan work or ask students to present their story in pictures or an animation.

COPPER WORK

VISIT OR SCHOOL ACTIVITY

Cross-curricular links: History; Technology; Art

NC concepts and processes: Creativity, Cultural Understanding, Explore and Create, Designing and Making, Plan and Organise, Understanding Design.

PLTS: Creative Thinkers, Self Managers

Objectives: to develop understanding of old crafts; to develop creativity

On site or at school

- Examples of old smelters marks (examples are seen in Geevor's museum or see Resource 8)
- Mirror writing (see Resource 8)
- Paper (for planning design)
- Thin copper sheets (any arts/crafts supplier should have these available)
- Embossing Tools (biros are a cheap, yet effective alternative!)
- Cardboard or cloth to protect surface
- String
- Optional, Wire sponge and sand bag

Starter—Show examples of smelters marks and ask group if they know what they are and why they were done? Ask students to describe the designs.

On paper they can plan a design for their own smelter's mark. When they are happy with it use the tools to indent marks remembering to work on the back so that the marks stick out. Small sand bags can also be used to rest the work on and produce curved designs. A wire sponge can be lightly passed across the copper surface to reveal a silver design beneath. Students could produce a mobile or display using their designs or they could add these marks to their art work (see art and landscape task).

Plenary—Students describe their mark to the class and explain why they chose to do it like they did.

Background Note: Smelting is the process of heating the black tin ore concentrate (SnO_2) in a carbon environment to reduce it to molten tin metal (Sn). This molten tin was cast into an ingot mold which contained the 'smelter's mark' or logo. This mark identified where the tin was smelted and the ingot made. When cooled, the marked appeared preserved tin ingot as convex letters and pictures. (see Resource 8).

A MINER'S TALE

VISIT OR SCHOOL ACTIVITY

Cross-curricular links: Technology; Geology/Geography; History; English

NC concepts and processes: Enquiry, Communication, Cultural understanding, Speaking and Listening, Physical and Human Processes, Environmental Interaction, Space, Place, Out of class learning, Know and Understand materials

PLTS: Effective Participators, Team Workers

Objectives: to develop an understanding of the past and knowledge of traditional industries that make up our cultural heritage; to develop links with the local community; to improve our skills of communication

On site or at school

- Miner (Tin and coal, if link made to National Coal Mining Museum for England)
- Paper or ActiveInspire
- Video conferencing equipment

Starter— Explain the task to students. Ask them to come up with three questions each that they might ask the miner (s). Feedback from students and write up best questions on Promethean/SMART board. Use handwriting recognition tool. Print off for each student.

Interview of miner. If you can set up a video conference with the National Coal Mining Museum in Wakefield then students can compare tin and coal mining. If you have access to sound recording equipment then students could record the interview so that it can be used to refer to back in class.

Plenary—Question cards to assess students listening skills

Note: Geevor doesn't yet have teleconferencing capabilities but a miner could be made available to visit local schools if travel expenses are paid for.

The National Coal Mining Museum for England, Wakefield has information about their videoconferencing on their website:

<http://www.ncm.org.uk/displaypage.asp?id=129>

or see the promotional video about videoconferencing at:

<http://shareit.yhgf1.net/enews/?p=706>

OTHER POSSIBLE ACTIVITIES

Other activities that schools may wish to do after the visit include:

- ◆ Students produce a piece of music about a miner's life. Students could research miner songs and folk songs and use this as an inspiration for their own song. Then they have to compose and record a version of their song.
- ◆ On canvas students can produce a piece of abstract art which juxtaposes the natural environment with the man-made environment. They need to think about what shapes to use in both and what colours. Use images collected from the visit to come up with a final piece.
- ◆ Students produce a memory board of the visit. They could perhaps make a collage using photos taken on the day.
- ◆ Students could use recording equipment and produce a documentary on tin mining in Cornwall—Past and Present.
- ◆ Students could produce a model or 3D picture of the landscape around Geevor. They could perhaps focus on Wheal Mexico mine or the engine house. They could use matchsticks or cardboard or paper mâché.
- ◆ Students could give a presentation to the class using PowerPoint or moviemaker
- ◆ Students could compose some poetry about mining.
- ◆ It might be an idea for students to plan an assembly on Geevor and the mining landscape. They could use art, role play and narration.
- ◆ It would be an excellent idea for all students work to go on display. Maybe an evening could be arranged for parents to see an exhibition. Ask Geevor if they too could be involved.

Finally...

It would be really useful to get feedback on the day so that things may be reassessed and adapted for future trips or so that you can measure progress and how much a student has learned.

A good way to assess progress is by doing a survey before the trip and before learning takes place. Then do a second survey (exactly the same) after the trip.

You may wish to type up your survey or even test knowledge by simple question and answer. Students could hold up a red board for 'don't know' and a green one for 'know'.

Even better is an internet site www.surveymonkey.com. Simply register and compose a survey online. You can either e-mail it to students or give them the survey URL address to complete it online.

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