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| **Lesson Five: Pottery** |
| No lesson focusing on pottery is ever going to be complete without giving students the opportunity to make their own. So while the goal of these plans is to be as accessible as possible, this particular lesson will need a little preparation. Air drying clay is suitable but if you have access to a kiln, fired clay works even better. There is also the opportunity to handle genuine prehistoric pottery which, as a link to the past, will inspire some students. |
| **Curriculum Links - Social Subjects (People, Past Events and Societies)** |
| Experiences and Outcomes | Benchmarks |
| **I can use my knowledge of a historical period to interpret the evidence and present an informed view. SOC 3-01a****I can explain the similarities and differences between the lifestyles, values and attitudes of people in the past by comparing Scotland with a society in Europe or elsewhere.** SOC 3-04a**I can describe the factors contributing to a major social, political or economic change in the past and can assess the impact on people’s lives. SOC 3-05a** | * **Compares a range of primary and secondary sources of evidence, to present at least three valid conclusions about a historical period.**
* **Identifies at least three factors which contributed to a major social, economic or political change in the past.**
* **Provides at least two valid opinions about the impact on people’s lives of a major social economic or social change in the past.**
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| **Wider Curricular links** |
| **Expressive Arts (Art & Design):**I have experimented with a range of media and technologies to create images and objects, using my understanding of their properties. **EXA 3-02a**I can use and combine the visual elements and concepts to convey ideas, thoughts and feelings in expressive and design work. **EXA 3-03a**Through observing and recording, I can create material that shows accuracy of representation. **EXA 3-04a****Technologies (Exploring Uses of Materials):**I can explore the properties and performance of materials before justifying the most appropriate material for a task **TCH 3-10a** |

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| **Learning Objectives** |
| I can identify the properties of materials and explain how they can be used to create items. |
| I can create an item using historic techniques. |
| I understand that in the past, information was shared from person to person by demonstration and word of mouth. |

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| **Resources and Suggested Reading** |
| **Required Resources - Supplied in the boxes or from ARCH website** |
| Objects: Beakers, Prehistoric pottery sherds (Box 1)Information Sheets: Object Sheets: Beaker Pots, Prehistoric Pottery; CT Making Prehistoric Pottery Other Resources: ARCH Bronze Age Pottery Workshop Video ([Link](http://www.archhighland.org.uk/experimental-archaeology.asp)) |
| **Additional Required Resources** |
| Archaeology Soup Pottery Workshop video ([link](https://www.youtube.com/watch?v=5mkhMaWVQ0g)) Modern porcelain objects (plates or mugs), air drying clay (or fired clay if possible), sponge, water containers, food colouring, scrap paper (or Post-it notes) |
| **Essential Reading - Information sheets supplied in the box or from ARCH website** |
| CT Making Prehistoric Pottery |
| **Suggested Additional Reading - Information sheets supplied in the box or from ARCH website** |
| No additional reading required |

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| **Introduction** | **10 minutes** |
| **What Are Ceramics?** (5 minutes) | Resources: Objects: Beakers (Box 1)Other Resources: modern porcelain objects (plates or mugs) |
| * This introduction is designed to assess the students’ knowledge of ceramics and compare the qualities of the items.
* It will require some plates and mugs brought from home or “borrowed” from the staff room.
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| As a *think-pair-share* exercise ask the students ***What things do you use in your home which are ceramic?***Borrow some mugs and plates from the staff room or bring some from home if there is not enough. Aim for two per table or small group.Give the class thirty seconds, in silence, to think of two things they notice about the items. Have them share their answers with a partner and collate. Your students should have noticed that the objects are smooth (or glazed), hard and potentially fragile if dropped.Show the class the beakers from Box 1. Explain that these are typical Early Bronze Age beakers and are found in archaeological sites all over Britain, often in grave sites. Ask the class ***What are the differences between these two types of pottery?*** In contrast the students should notice that the beakers are rougher and unglazed but they are still hard and potentially fragile. |
| **Glazing** (5 minutes) | Resources: Air drying clay, glazed plate, water |
| * This exercise is designed to investigate what glazing is for and why it is beneficial.
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| Ask the class ***What is the glaze for?***It serves two purposes on modern pottery: it seals in the design and protects it during washing, and also seals the ceramic material as unglazed pottery is porous.*OPTIONAL: To explain the above is easiest with a demonstration but requires a little preparation. However, if time is restricted it shouldn’t be detrimental to the lesson to skip this step. A couple of days before the lesson, use air drying clay to make a small square. It doesn’t have to be particularly neat.* Drip drops of water on the square and a glazed plate with a pipette if you have one (or just from your fingers if not) and ask the students to share what they see. Small water droplets will form on the glazed plate but will slowly soak into the unglazed clay square leaving a damp mark. Explain that this is the water soaking into the clay as it is porous. Write the world on the board. |

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| **Main** | **1 hour & 20 minutes** |
| **Porous** (10 minutes) | Resources: Objects: Prehistoric pottery sherds (Box 1)Information Sheets: Prehistoric Pottery object sheetOther Resources: Sponge, water, container |
| * The following activity tasks the class with figuring out why porous ceramics are a problem and how people in the past sealed their ceramics.
* This activity does involve some whole class teaching but is framed around a practical demonstration.
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| Fill a container with water, mark the container with a board marker to show the water level and then place an ordinary washing up sponge in the container. Ask the class ***What is happening to the sponge?*** Explain to the class that within the sponge there are pockets of air. When a sponge is placed in water it rushes into these air pockets and fills them. The fibrous material the sponge is made of swells and traps the water, until it is squeezed and the water is forced out through pressure.Show the class the sherds of genuine prehistoric pottery from Box 1. Have the class inspect them closely and look especially at the sides of the sherds. They should be able to see little holes.It is important to now explain that while prehistoric pottery is nowhere near as porous as a sponge, if left unsealed; the pottery will absorb some liquid. Ask the class ***Why is this a problem?***The sponge should have soaked up some water so remove it from the container. Mark the new water level with a board marker. Explain that if you were trying to boil some food or transport liquid, the porosity of the pottery would cause problems. Ask ***How do we solve that problem?***(cover the holes, seal the pores or create a coating on the inside of the pot).Refill the container to the top mark and then place the sponge in a sandwich bag or plastic bag and seal it (it does not have to be new, a used bag is fine!) and place the sponge back in the water. Take the sponge out after a few moments and ask***Why hasn’t the sponge absorbed any water?*** Hopefully their answer will reflect the fact the plastic bag has formed a waterproof barrier. Tell the class ***I am going to read a paragraph of information to you now and I want you to listen for what was used to seal the ceramic in prehistoric times.*** (1) Read the second paragraph from the Prehistoric Pottery object information sheet. Ask ***What did the people living in those times use to seal the pottery?***(Animal fats).Explain that the animal fats filled and sealed the pores of the pot so that when it was filled with liquid very little would seep into the ceramic material. |
| **Porous (Continued)** (10 minutes) | Resources: Sponge, water, containers, food colouring |
| * It is important to remind the class that the beakers were effective as vessels for storing and carrying liquid.
* While the pottery was sealed some small amount of seepage would sometimes take place meaning, through analysis of the ceramic pots, we sometimes can tell what they were used for.
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| For this activity you will need some sponges, containers for water and food colouring.Ideally, use three containers filled with water of different colours. Ask the class ***What will happen when I dip the sponge in the water?*** Demonstrate what happens. Cover the containers so the class can’t see them (a sponge can soak up so much water that it is obvious which container you have dipped it in due to the change in water level. The students will almost definitely spot it and it will defeat the point of the next task).Ask the class to close their eyes. Dip the sponge in a container and get rid of some of the excess. Have the class open their eyes and ask ***How can we tell which container I have dunked the sponge into?***Hopefully the class will realise that by squeezing it out they will be able to see what colour the water is.Squeeze the water out and test their hypothesis. Repeat once or twice more.Explain that the coloured water is like the substances contained in pottery from the past. They are all slightly different and have different chemical properties. While the pots were sealed with fats it was not always a perfect seal, or if used for cooking some burnt residue could be left on the inside and this can show us what the pots were used for and therefore can give clues to the life of people in the past. |
| **Pottery Sherds** (10 minutes) | Resources: Objects: Prehistoric pottery sherdsInformation Sheets: Prehistoric Pottery object information sheet (photocopied to allow cutting) |
| * The sherds are genuine artefacts and it is worth explaining to the students that they are holding items that are thousands of years old.
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| Explain that pottery is often found in fragments (show the sherds to highlight the point). Ask ***Why is this?*** Even if it goes into the ground as a complete pot, over the thousands of years it is buried it is likely to shatter at some point. Share the pottery sherds with the class and explain, again, that these are genuine pottery fragments and were once used anywhere up to 6000 years ago. Split the class into groups of three or four. If you have students who struggle with reading, pair them within a group to work with a more able student. Cut the Prehistoric pottery information sheet into three sections - one paragraph on each slip - and hand them to the groups.Ask the first student to read the first paragraph, the second student to read the second paragraph and the third student to read the third paragraph. Explain they are going to summarise what they have just read to the rest of their group. As you have already read the second paragraph it can be given to the less able readers in the class. After that is finished ask for some volunteers to summarise each paragraph to the class.Ask the class the following questions to be discussed in their groups (the questions can be displayed on the board and their answer recorded in writing if you wish):* ***What substances might have been contained within the pots?***
* ***What inferences can we make about life in prehistoric Britain from these substances?***

Evidence of milk suggests cattle were kept domestically which indicates farming was becoming ever more important in the lives of people in the past.Finally reiterate that from a simple sherd of pottery we can learn lots of different things that teach us about how people lived in the past. |
| **Create a pot:** (50 minutes) | Resources: Objects: Beakers (Box 1)Information Sheets: Additional image: Highland Bronze Age BeakersOther Resources: Air drying clay. Either the ARCH video ([link](http://www.archhighland.org.uk/experimental-archaeology.asp)), or one by Graham Taylor ([link](https://www.youtube.com/watch?v=5mkhMaWVQ0g)) or both |
| * This is the best bit… but optional!
* Air drying clay works well but fired clay is great if you have access to a kiln.
* The YouTube videos shared are excellent for explaining how these pots are made. The first (a coil pot) was produced by ARCH - the creator of these loans boxes - and the second by Graham Taylor introduced by Archaeology Soup ([link](https://www.youtube.com/watch?v=5mkhMaWVQ0g)). Filming sessions like these are very difficult especially with managing audio, and while at times it can be difficult to hear, it is worth persevering as the demonstrators are very knowledgeable.
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| No pottery lesson is complete without students making their own pot. Working with third level students means the end product could be very impressive.You can choose whether to attempt a pinch pot, a coil pot or both as part of this activity. My advice would be to watch both videos and see which you feel would work with your class.ARCH Workshop (<http://www.archhighland.org.uk/experimental-archaeology.asp>)Archaeology Soup Workshop (<https://www.youtube.com/watch?v=5mkhMaWVQ0g>)Take the two beakers from Box 1 and show them to the class. Discuss, briefly, the shape of the pot and explain to the class that this is a *classic* Bronze Age pottery shape.Watch the video - whichever you choose - in its entirety as it shows the students what the various stages are. Below are the timestamps for each video so you know where to pause to allow the students to complete a section at a time. You could otherwise show them the whole technique and let them work through it independently. **ARCH Video (Coil Beaker):**0:00 - Starting point for a coil pot - creating ball of clay and flattening it into a round disk for the base.0:43 - Discussion about the lack of potter’s wheels in this time period.1:33 - Making coils to build up the sides of the beaker.2:07 - Adding coil to the beaker.4:01 - Adding second coil.4:52 - Discussion about prehistoric people sourcing their clay.6:05 - Creating decoration on the pots and creating the classic beaker shape.**Archaeology Soup (Pinch Pot):**0:10 - Introduction to the subjects of the video.0:33 - Explanation of prehistoric pottery.1:32 - Examples of different prehistoric pottery.1:55 - Discussion of Bronze Age pottery (including beaker pots) and the introduction of the potter’s wheel after the Iron Age.3:11 - Discussion on the importance of pottery in archaeology.4:13 - Presentation by Graham Taylor - *Potted History* - explaining the different types of prehistoric pottery.8:05 - Introduction to creating a pinch pot.9:21 - Start point for both pots - creating a ball.9:44 - Starting the pinch pot.11:01 - Pinch and turn to thin the pot out.11:32 - Creating the carination (shoulder) at the top of the bowl.12:29 - Beginning the Bronze Age beaker - starting with recreating a ball of clay.12:59 - Technique for creating tall beaker.13:38 - Changing hands to create the top of the beaker.14:17 - Shaping the beaker.14:50 - Creating decoration - including an excellent demonstration of the dangers of trying to give an explanation to young people in possession of clay.Whichever method you use, have the students create a pinch pot or coil beaker (or if time and resources allow, both) based on the demonstration in the videos. If you create both you can then discuss the different methods and the skill level required to make the two types of pot.Finally finish the pot with decoration, either by scoring classic geometric patterns into it, or if you wish to create something a little more individual to the students, using objects of the student’s choice gathered from outside - twigs, leaves, pine cones, pebbles, for example. Some example decoration is on the Additional Image: Highland Bronze Age Beakers sheet. |

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| **Plenary** | **10 minutes** |
| **The Passing of Information** (5 minutes) | Resources: Scrap paper (or Post-it notes) |
| * This quick closing exercise is simply to demonstrate how crafting techniques pass from one person to the next.
* The lesson could start with this activity as well if desired.
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| Arrange the class in a circle facing away from each other. Explain that information was passed on from one person to another by word of mouth.Give a small piece of paper and a pencil to all students and keep one for yourself. Secretly draw a simple shape on your piece of paper and show it to the person on your left. They are to copy the drawing and pass it on to the person to their left.Next, turn the paper over and draw a new shape on the paper and show it to the person on your right who then copies it and shows their drawing to the person on their right.This carries on until both shapes have passed around the whole of the circle. Compare the original drawings to the final ones. Unlike Chinese whispers, the drawings should be similar with slight variations. Explain that the shapes represent knowledge, such as how to create a pinch pot. People shared this knowledge and went away to create their own pots. As they did so they changed the technique slightly and found it made a better pot and so passed that new technique to someone else. Over time technology then progressed and styles changed as well.You can repeat the exercise if you wish to highlight what was just discussed. |
| **Recap** (5 minutes) | Resources: None |
| * Although simple, a recap is always a useful assessment tool.
 |
| Finally ask the students to recap with a partner the things they have learnt about Bronze Age pottery. Share their thoughts with the rest of the class. Recap that the beaker in the box is the iconic Bronze Age pottery item found by archaeologists due to their prevalence in burials. |

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| **Total Lesson Time: 1 hour & 40 minutes** |
| **Teaching notes** |
| 1. As an additional support needs teacher, I was introduced to a learning difficulty called developmental language disorder. This is something I had never heard of, but apparently 50% of dyslexic students also show signs of developmental language disorder. It is worth reading up on. The technique of giving the specific information to listen out for before reading a passage or entering into a lengthy explanation will allow a student greater access to the learning you are intending to impart. Another key component of helping someone with developmental language disorder is repeating explanations word for word. Our natural teaching instinct is, when a student doesn’t understand an explanation for a task, to reframe the explanation in a different way. However, a student with developmental language disorder struggles to access the language and by changing the explanation you are simply throwing more language at them to try and unpack. By repeating the explanation you are allowing them the time they need and reinforcing the language you are using, therefore giving them the space to decode what you are saying and relate it to the task they are trying to complete. Even knowing this I still fall into old habits as it is so ingrained into my teaching style.
2. Some of the activities in these lessons are based around co-operative learning techniques. Whether or not you use co-operative learning regularly in your classroom these activities will work with most groups. When engaging in group work, co-operative learning provides a deeper level of engagement because the students are accountable to the rest of the group and all members are required to participate at all times. If you have never used co-operative learning techniques it is well worth looking into as they really are an asset to add to the range of pedagogies employed by any teacher of any level.
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| **Links and Further Information** |
| ARCH Bronze Age Pottery Workshop video: [www.archhighland.org.uk/experimental-archaeology.asp](http://www.archhighland.org.uk/experimental-archaeology.asp)Archaeology Soup Pottery Workshop video: [www.youtube.com/watch?v=5mkhMaWVQ0g](http://www.youtube.com/watch?v=5mkhMaWVQ0g)Box 1 Object information Sheets: Beakers and Prehistoric PotteryAdditional Image Sheets: Highland Bronze Age beakers, Culduthel Cist Burial GravegoodsThere are many illustrations of beaker pots from Scotland on the [SCRAN](http://www.scran.ac.uk) website www.scran.ac.uk. There is currently no easy way to find illustrations of local examples.Some videos in addition to the ones above that you may find interesting:[Making a BA Replica beaker](http://www.youtube.com/watch?v=MJgzO9cgPPo) by Graham Taylor (2:41)[www.youtube.com/watch?v=MJgzO9cgPPo](http://www.youtube.com/watch?v=MJgzO9cgPPo)[Making the Doons Law Beaker](http://www.youtube.com/watch?v=3kCwYQRwFsI) by Graham Taylor (3:12)[www.youtube.com/watch?v=3kCwYQRwFsI](http://www.youtube.com/watch?v=3kCwYQRwFsI)[Bronze-Age Pottery Workshop Prehistoric Firing](http://www.youtube.com/watch?v=Aa4B43Qs_iQ) by Graham Taylor (0.59)www.youtube.com/watch?v=Aa4B43Qs\_iQ[Replicating the Scalpsie Bronze-Age Beaker](http://www.youtube.com/watch?v=Bq24E30I1Zw) by Graham Taylor (57:15)www.youtube.com/watch?v=Bq24E30I1Zw[Going for Bronze – Making a Reconstruction Bronze Age Pot](http://www.youtube.com/watch?v=-zOUlr2bsSg) (14:59)Making and firing of a reconstruction Trevisker ware Bronze Age pot at Powdermills Pottery [www.youtube.com/watch?v=-zOUlr2bsSg](http://www.youtube.com/watch?v=-zOUlr2bsSg)[Making a Bronze Age Encrusted Urn](http://www.youtube.com/watch?v=kdXcxaMVYL4) by Graham Taylor (2:35)[www.youtube.com/watch?v=kdXcxaMVYL4](http://www.youtube.com/watch?v=kdXcxaMVYL4) |

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